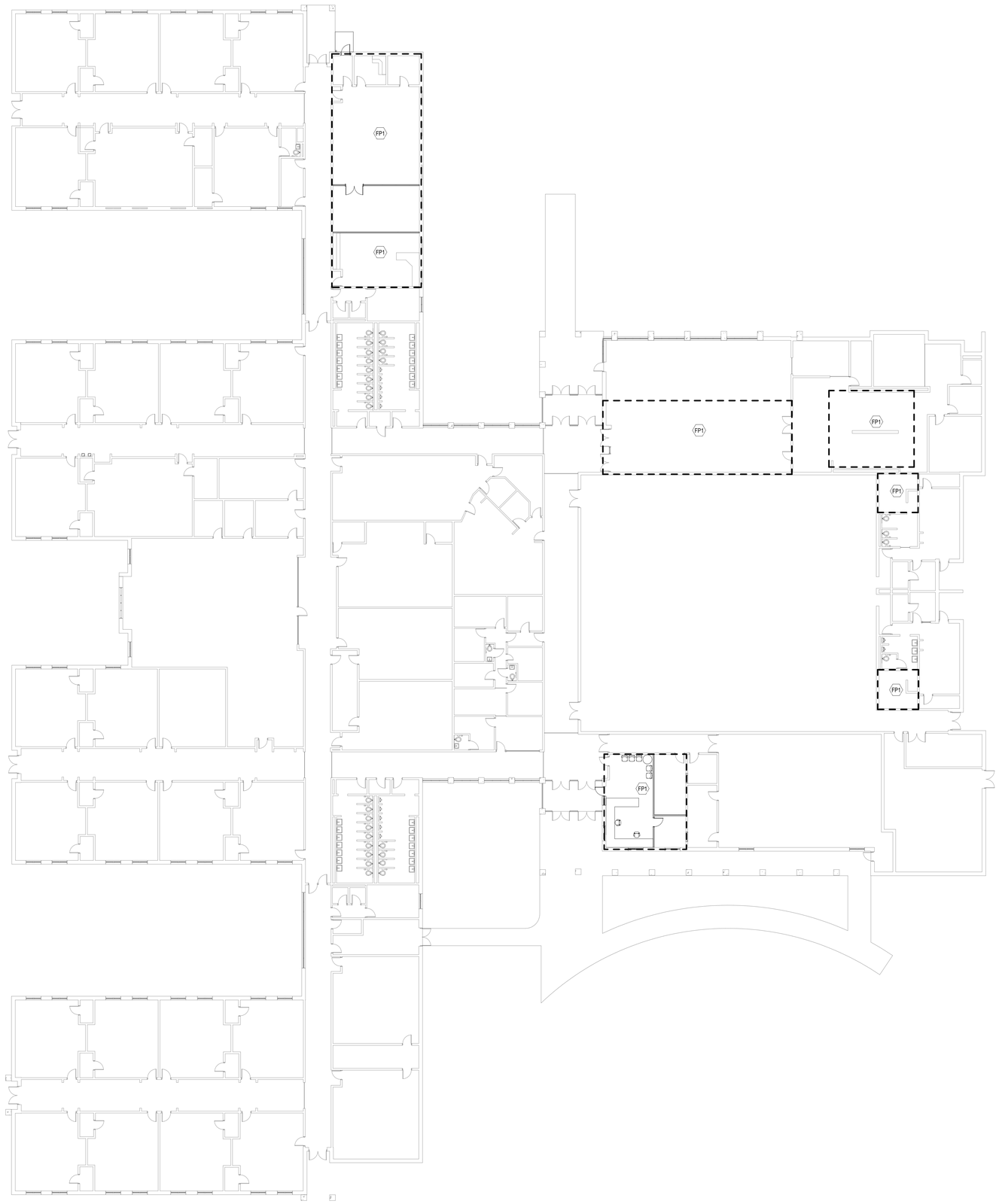
TAGGED NOTES	
FP1	CONTRACTOR TO ADJUST THE LOCATIONS OF SPRINKLER HEADS IN THIS AREA DUE TO CEILING REPLACEMENT OR ROOM RENOVATIONS.



1 FIRST FLOOR - FIRE PROTECTION PLAN
1/16" = 1'-0"

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Project Status

STATE OF KENTUCKY
AARON D. SHULTZ
24147
LICENSED PROFESSIONAL ENGINEER

MERCER COUNTY SCHOOLS

MERCER INTERMEDIATE SCHOOL RENOVATIONS
MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

FIRE PROTECTION FLOOR PLAN

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

REVISIONS

FP1.0

HAZARDOUS MATERIAL NOTE:

A. THE CONTRACTOR IT IS HEREBY ADVISED THAT IS POSSIBLE THAT ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS ARE OR WERE PRESENT IN THIS BUILDING(S). ANY WORKER, OCCUPANT, VISITOR, ETC., WHO ENCOUNTERS ANY MATERIAL OF WHOSE CONTENT THEY ARE NOT CERTAIN SHALL PROMPTLY REPORT THE EXISTENCE AND LOCATION OF THAT MATERIAL TO THE OWNER. FURTHERMORE, THE CONTRACTOR SHALL INSURE THAT NO ONE COMES NEAR TO OR IN CONTACT WITH ANY SUCH MATERIAL OR FUMES THEREFROM UNTIL ITS CONTENT CAN BE ASCERTAINED TO BE NON-HAZARDOUS.
B. CMTA, INC. HAS NO EXPERTISE IN THE DETERMINATION OF THE PRESENCE OF ANY HAZARDOUS MATERIAL. THEREFORE, NO ATTEMPT HAS BEEN MADE BY CMTA TO IDENTIFY THE EXISTENCE OR LOCATION OF ANY SUCH HAZARDOUS MATERIAL. FURTHERMORE, CMTA NOR ANY AFFILIATE HEREOF WILL NOT OFFER OR MAKE ANY RECOMMENDATIONS RELATIVE TO THE REMOVAL, HANDLING OR DISPOSAL OF SUCH MATERIAL.
C. IF THE WORK WHICH IS TO BE PERFORMED INTERFACES, CONNECTS OR RELATES IN ANY PHYSICAL WAY WITH OR TO EXISTING COMPONENTS WHICH CONTAIN OR BEAR ANY HAZARDOUS MATERIAL, ASBESTOS BEING ONE, THEN IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONTACT THE OWNER AND SO ADVISE HIM/HER IMMEDIATELY.
D. THE CONTRACTOR BY EXECUTION OF THE CONTRACT FOR ANY WORK AND/OR BY THE ACCOMPLISHMENT OF ANY WORK THEREBY AGREE TO BRING NO CLAIM RELATIVE TO HAZARDOUS MATERIALS FOR NEGLIGENCE, BREACH OF CONTRACT, INDEMNITY, OR ANY OTHER SUCH ITEM AGAINST CMTA, ITS PRINCIPALS, EMPLOYEES, AGENT'S OR CONSULTANTS. ALSO, THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD CMTA, ITS PRINCIPALS, EMPLOYEES, AGENT'S AND CONSULTANT'S HARMLESS FROM ANY SUCH RELATED CLAIMS WHICH MAY BE BROUGHT BY ANY SUBCONTRACTORS, SUPPLIERS OR ANY OTHER THIRD PARTIES.
E. THE CONTRACTOR IS DIRECTED TO THE SPECIFICATIONS FOR FURTHER INFORMATION.

PHASING NOTE:

A. THIS PROJECT INTERFACES EXTENSIVELY WITH EXISTING BUILDING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND PHASE ALL TIE-INS AND INTERRUPTIONS OF EXISTING SERVICES TO MINIMIZE OR ELIMINATE DOWNTIME. AS AN EXAMPLE, MAIN GAS SERVICE, WATER SERVICE, ELECTRICAL SERVICE, HVAC SERVICES, STEAM GENERATION, ETC., WILL BE AFFECTED AND REPLACED OR MOVED DURING THIS PROJECT. THE CONTRACTOR SHALL INSTALL ALL NEW SERVICES AND EQUIPMENT AND HAVE THEM TESTED AND FULLY AND RELIABLY FUNCTIONAL PRIOR TO INTERRUPTING, RELOCATING OR REMOVING ANY EXISTING SERVICES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BARE ANY AND ALL COSTS ASSOCIATED WITH THIS PHASING, INCLUDING TEMPORARY SERVICES, TEMPORARY RELOCATION, PREMIUM TIME WORK, ETC. CONTRACTOR SHALL COORDINATE ALL SAID WORK WITH THE OWNER AND APPLICABLE UTILITIES PER THE CONTRACT DOCUMENTS.

MECHANICAL DEMOLITION NOTES:

A. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELED VERIFIY EXACT REQUIREMENTS.
B. ALL OUTAGES SHALL BE SCHEDULED THROUGH THE PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.
C. DURING SPRINKLER SYSTEM OUTAGES THE CONTRACTORS SHALL PROVIDE FIRE WATCH OF AREAS WITH OUTAGES.
D. ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.
E. ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.
F. HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (U.O.N) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
G. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH THE OWNER.

MECHANICAL GENERAL NOTES:

A. COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
B. THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO ENSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
C. WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
D. ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
E. COORDINATE ALL WORK WITH PROJECT PHASING REQUIREMENTS.
F. PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
G. OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.).
H. CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING, HVAC AND ELECTRICAL WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
I. ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
J. ALL WORK REQUIRING DOWNTIME OF ANY AREA IN THE BUILDING SHALL BE SCHEDULED 2 WEEKS IN ADVANCE.
K. ALL DUCTWORK, PIPING, CONDUITS, ETC. IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
L. INSTALL AIR VENTS AT HIGH POINTS IN PIPING AND DRAINS IN LOW POINTS. USE CARE TO AVOID FREEZING OF EXTERIOR VENTS.
M. LOCATIONS OF PIPING, DUCTS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
N. ALL OFFSETS IN DUCTS AND PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
O. COORDINATE ALL HVAC WORK WITH ELECTRICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.
P. INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
Q. SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
R. SEAL ALL NEW DUCTWORK JOINTS WITH UNITED MCGILL, IRONGRIP 601 OR EQUAL WATER BASED SEALANT.
S. ALL MOTOR DRIVEN EQUIPMENT SHALL BE INSTALLED WITH FLEXIBLE CONNECTIONS TO DUCTWORK, PIPING, ETC., UNLESS OTHERWISE NOTED.
T. THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
U. WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
V. DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.
W. ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
X. DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
Y. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
Z. ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
AA. WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.
AB. WORK IN CONFINED AREAS SHALL BE IN ACCORDANCE WITH THE OWNER'S SAFETY POLICY REQUIREMENTS.
AC. THE DOCUMENTS COMPLY WITH 2012 IMC, 2018 KBC, AND 2012 IECC.

SYMBOLS & ABBREVIATIONS

	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	LINEAR SLOT DIFFUSER
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
RA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
D(NAME)	DUCT TO BE DEMOLISHED
E(NAME)	EXISTING DUCT
	FLEXIBLE DUCT
FD	FIRE DAMPER
SD	SMOKE DAMPER
FSD	COMBINATION FIRE/SMOKE DAMPER
	MOTORIZED DAMPER
	VOLUME DAMPER
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
BAS	BUILDING AUTOMATION SYSTEM
CD	CONDENSATE DRAIN
C.I.	CAST IRON
CO	CARBON MONOXIDE SENSOR
DD	DUCT SMOKE DETECTOR
DN	DOWN
FD	FIRE DAMPER
H	HUMIDITY SENSOR
ID	INSIDE DIMENSION
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIMENSION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSI	POUNDS PER SQUARE INCH
S	SWITCH
SD	SMOKE DAMPER
T	THERMOSTAT
TB	THRUST BLOCK
TS	TEMPERATURE SENSOR
TE	TOP ELEVATION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

VFD	VARIABLE FREQUENCY DRIVE
XXX	EQUIPMENT TAG DESIGNATOR
	POINT OF CONNECTION
	LIMIT OF DEMOLITION
	PIPE ELBOW TURNING UP/TURNING DOWN
	PIPE TEE TURNING UP/TURNING DOWN
CHWS/R	CHILLED WATER SUPPLY/RETURN
CD	CONDENSATE DRAIN
CWS/R	CONDENSER WATER SUPPLY/RETURN
DTS/R	DUAL TEMP. WATER SUPPLY/RETURN
HWS/R	HEATING WATER SUPPLY/RETURN
HPS/R	HEAT PUMP WATER SUPPLY/RETURN
D(NAME)	PIPING TO BE DEMOLISHED
E(NAME)	EXISTING PIPING
ABAN(NAME)	ABANDONED EXISTING PIPING
	EXISTING DUCT OR PIPING TO BE REMOVED
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE
	STRAINER
	MANUAL ISOLATION VALVE
	GLOBE VALVE
	OS&Y (GATE) VALVE
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	AUTO-FLOW CONTROL VALVE
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	FLEXIBLE PIPE CONNECTION
	FLOW METER (VENTURI)
	PIPING UNION
	FLOW SWITCH
	PRESSURE SWITCH
	TAMPER SWITCH
	THERMOMETER
	PETE'S PLUG
X	TAGGED NOTE DESIGNATOR
X	REVISION DESIGNATOR
T	THERMOMETER
TS	TEMPERATURE SENSOR
CO_2	CARBON DIOXIDE SENSOR
H	HUMIDITY SENSOR

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Project Status

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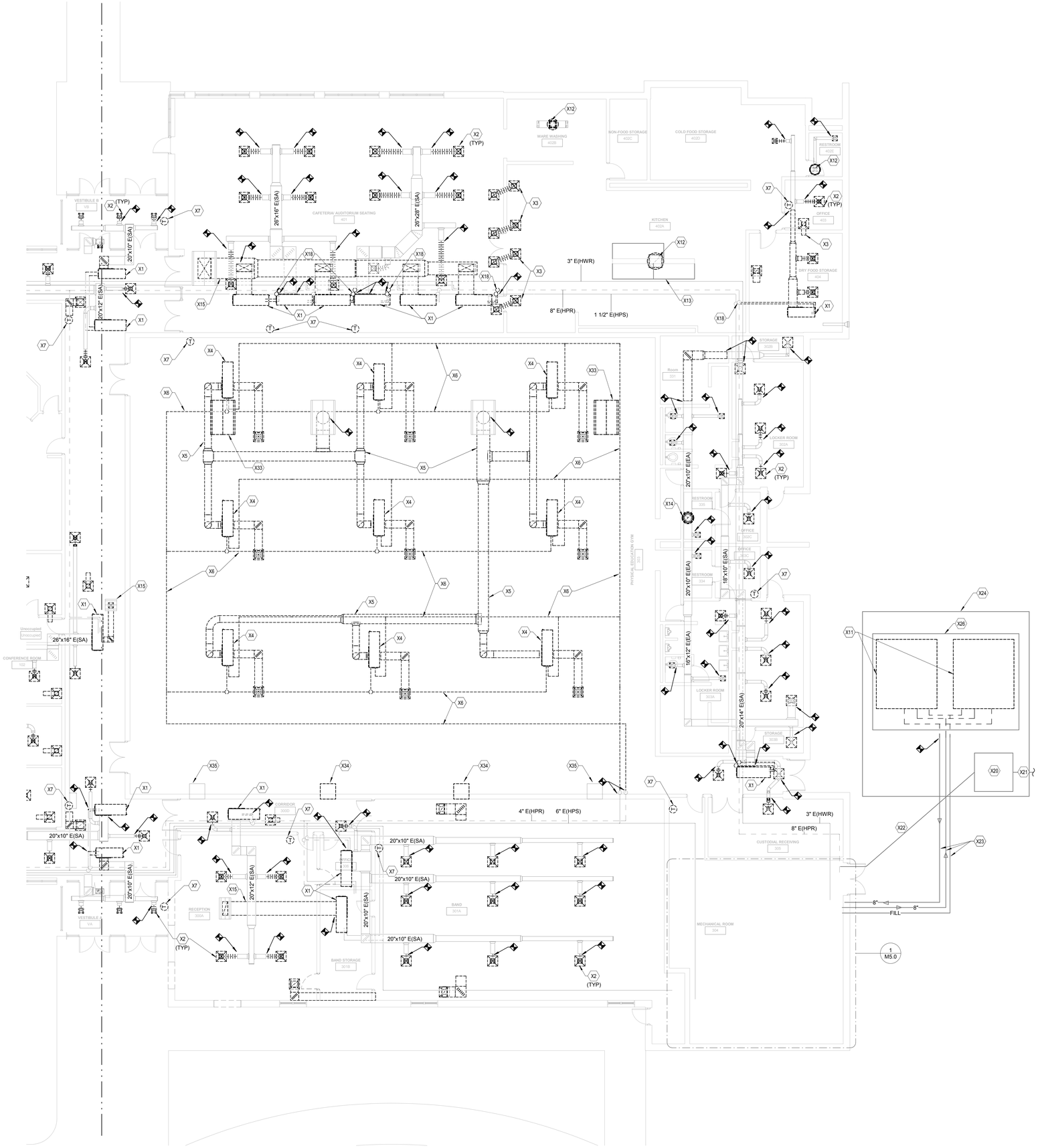
MERCER INTERMEDIATE SCHOOL RENOVATIONS
MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

MECHANICAL LEGEND

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

REVISIONS

M1.0



1 FIRST FLOOR - DEMOLITION - AREA A
1/8" = 1'-0"

TAGGED NOTES

X1	REMOVE EXISTING HEAT PUMP COMPLETELY, INCLUDING SUPPORT, WIRING, DUCTWORK AND TRANSITIONS TO THE POINT INDICATED.
X2	REMOVE EXISTING DIFFUSER, GRILLE OR REGISTER, INCLUDING FLEXIBLE DUCTWORK TO POINT INDICATED. UNLESS NOTED OTHERWISE, THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
X3	REMOVE EXISTING TRANSFER GRILLE AND DUCTWORK. PATCH HOLES THROUGH WALLS THAT ARE NOT BEING REUSED.
X4	REMOVE EXISTING HEAT PUMP AT ROOF COMPLETELY, INCLUDING SUPPORTS, DUCTWORK AND WIRING.
X5	REMOVE EXISTING DUCTWORK COMPLETELY.
X6	REMOVE EXISTING PIPING COMPLETELY, INCLUDING INSULATION AND SUPPORTS.
X7	REMOVE EXISTING THERMOSTAT AND WIRING. PREPARE EXISTING BOX IN WALL FOR NEW THERMOSTAT.
X11	REMOVE EXISTING FLUID COOLER UNITS COMPLETELY, INCLUDING SUPPORTS, PIPING, AND WIRING. REFER TO HYDRONIC DEMOLITION SCHEMATIC FOR ADDITIONAL INFORMATION.
X12	REMOVE EXISTING EXHAUST FAN ON ROOF. EXISTING CURB TO REMAIN.
X13	REMOVE EXISTING HOOD SECTION. DISCONNECT DUCTWORK FOR HOOD SECTION AND CAP AT DUCT RISER TO ROOF.
X14	REMOVE EXISTING EXHAUST FAN AND CURB ON ROOF.
X15	REMOVE EXISTING DUCTWORK UP TO EXISTING HOOD ON ROOF. HOOD AND CURB TO REMAIN.
X18	REMOVE BRANCH PIPING AS SHOWN. CAP UNUSED PIPING AT MAIN.
X20	EXISTING PAD MOUNT TRANSFORMER
X21	APPROXIMATE LOCATION OF PRIMARY. FIELD VERIFY.
X22	APPROXIMATE LOCATION OF SECONDARY. FIELD VERIFY.
X23	EXISTING 8" CS, CR & 1" FILL TO REMAIN.
X24	APPROXIMATE LOCATION OF EXISTING FENCE TO REMAIN.
X26	CONCRETE PAD.
X33	REMOVE EXISTING HOOD ON ROOF. CAP EXISTING CURB WITH INSULATED SHEET METAL CAP SLOPED TO SHED WATER.
X34	REMOVE EXISTING WALL MOUNTED EXHAUST FAN. EXISTING LOUVER TO REMAIN. REFER TO DETAIL FOR INFORMATION ON HOW TO SEAL UP EXISTING LOUVER.
X35	EXISTING WALL MOUNTED EXHAUST FAN TO REMAIN.

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DEMOLITION - FIRST FLOOR - AREA A

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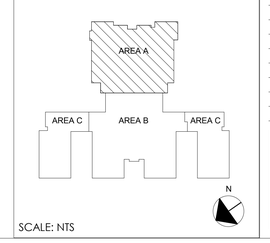
REVISIONS

KEY PLAN



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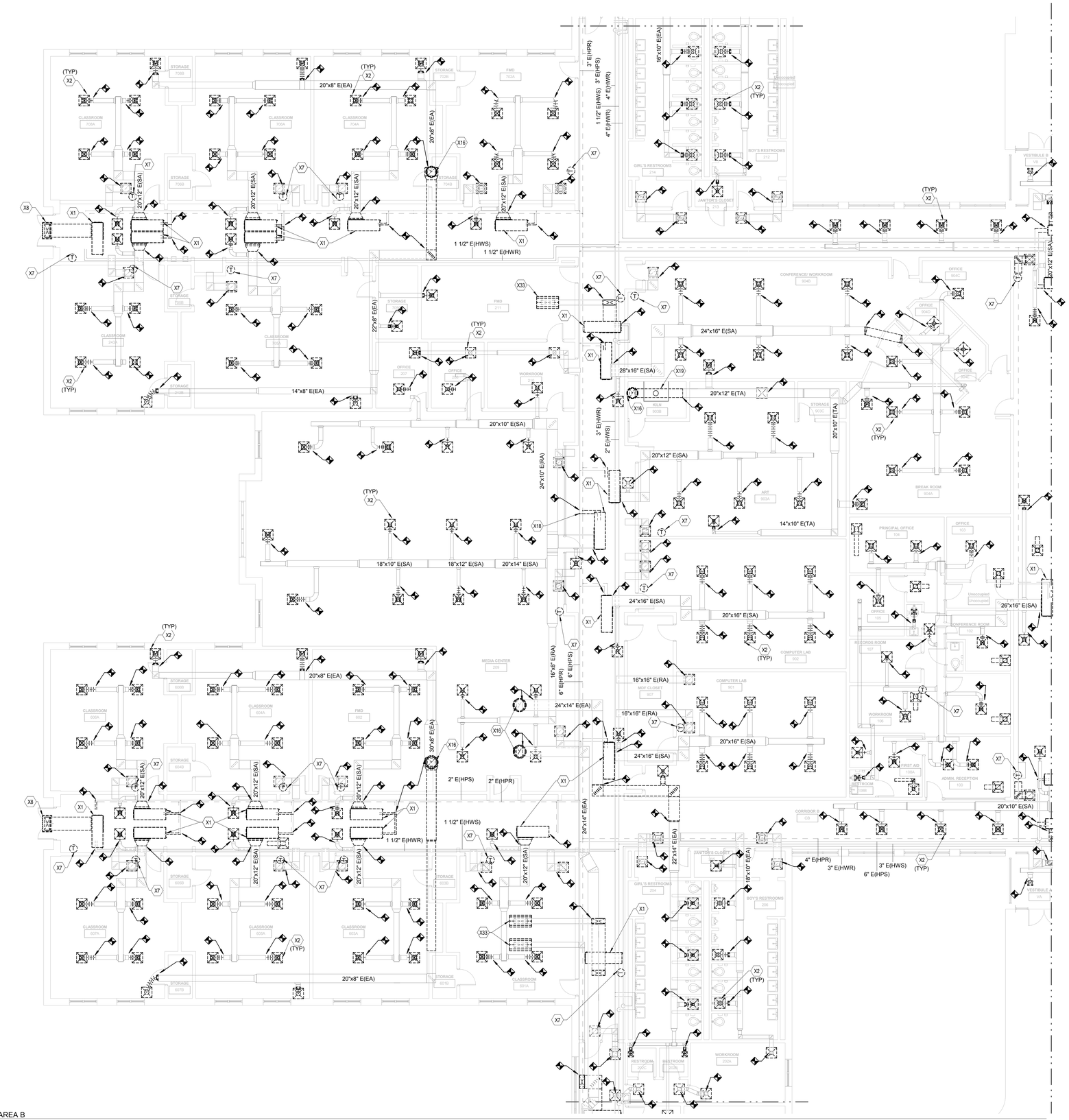

1 FIRST FLOOR - DEMOLITION - AREA B
1/8" = 1'-0"

TAGGED NOTES	
X1	REMOVE EXISTING HEAT PUMP COMPLETELY, INCLUDING SUPPORT, WIRING, DUCTWORK AND TRANSITIONS TO THE POINT INDICATED.
X2	REMOVE EXISTING DIFFUSER, GRILLE OR REGISTER, INCLUDING FLEXIBLE DUCTWORK TO POINT INDICATED. UNLESS NOTED OTHERWISE, THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
X7	REMOVE EXISTING THERMOSTAT AND WIRING. PREPARE EXISTING BOX IN WALL FOR NEW THERMOSTAT.
X8	REMOVE EXISTING INTAKE GRILLE AND DUCTWORK. SEAL PENETRATION THROUGH WALL ABOVE DOOR. COORDINATE PATCHING OF SOFFIT WITH ARCHITECTURAL DRAWINGS.
X16	REMOVE EXISTING FAN ON ROOF AND DUCTWORK DOWN TO MAIN. EXISTING CURB TO REMAIN. CAP AND SEAL DUCT TO REMAIN.
X18	REMOVE BRANCH PIPING AS SHOWN. CAP UNUSED PIPING AT MAIN.
X19	REMOVE DUCTWORK AS SHOWN. EXISTING KILN HOOD TO REMAIN.
X33	REMOVE EXISTING HOOD ON ROOF. CAP EXISTING CURB WITH INSULATED SHEET METAL CAP SLOPED TO SHED WATER.

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DEMOLITION - FIRST FLOOR - AREA B

PROJECT #:	XMKM18
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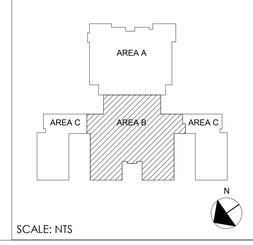
REVISIONS

KEY PLAN



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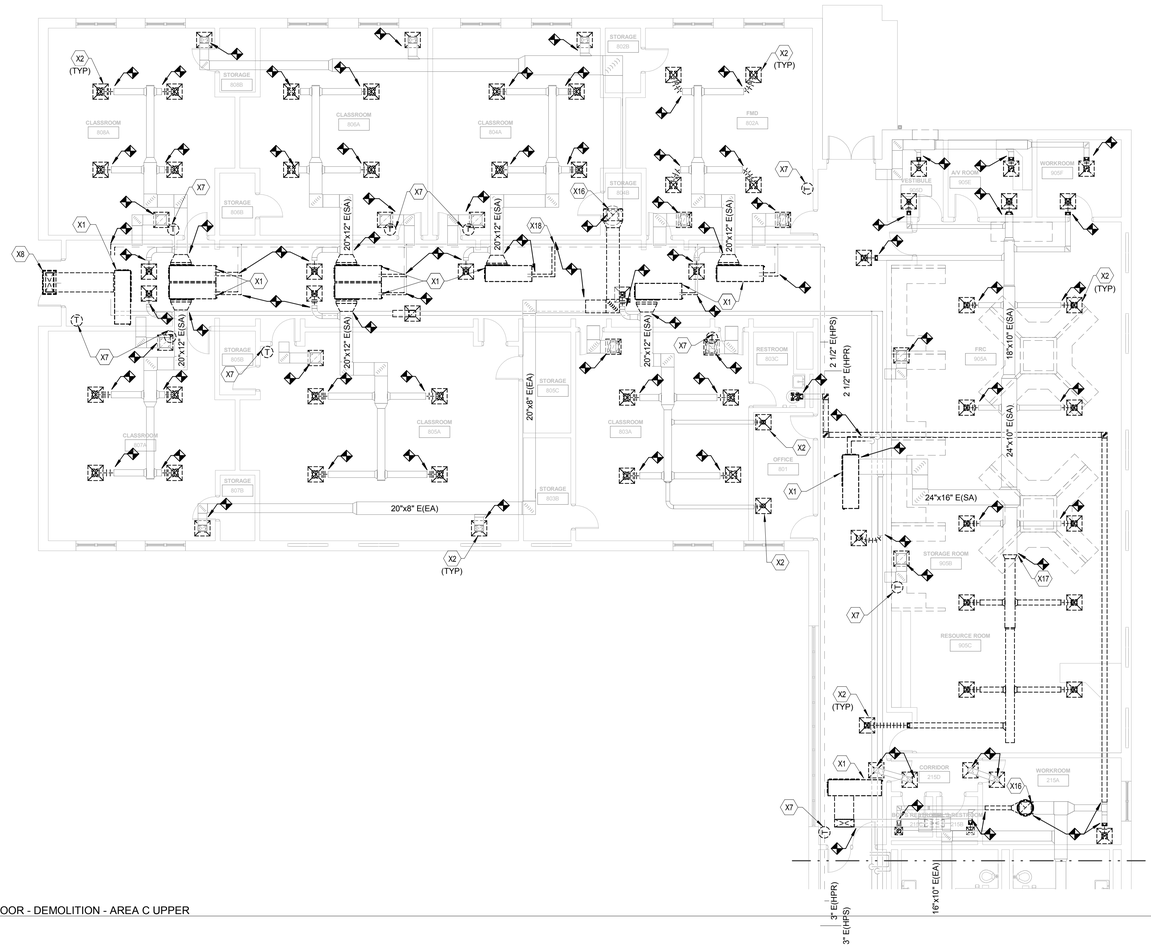
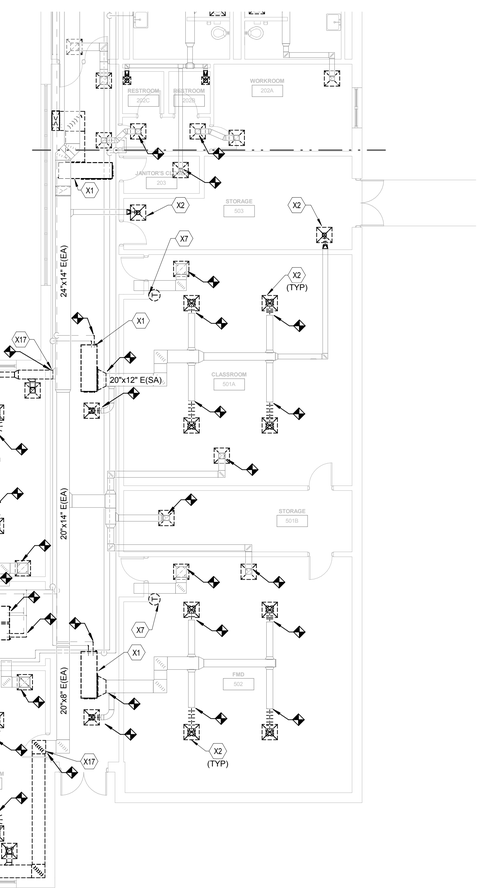
TAGGED NOTES	
X1	REMOVE EXISTING HEAT PUMP COMPLETELY, INCLUDING SUPPORT, WIRING, DUCTWORK AND TRANSITIONS TO THE POINT INDICATED.
X2	REMOVE EXISTING DIFFUSER, GRILLE OR REGISTER, INCLUDING FLEXIBLE DUCTWORK TO POINT INDICATED. UNLESS NOTED OTHERWISE. THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
X7	REMOVE EXISTING THERMOSTAT AND WIRING. PREPARE EXISTING BOX IN WALL FOR NEW THERMOSTAT.
X8	REMOVE EXISTING INTAKE GRILLE AND DUCTWORK. SEAL PENETRATION THROUGH WALL ABOVE DOOR. COORDINATE PATCHING OF SOFFIT WITH ARCHITECTURAL DRAWINGS.
X16	REMOVE EXISTING FAN ON ROOF AND DUCTWORK DOWN TO MAIN. EXISTING CURB TO REMAIN. CAP AND SEAL DUCT TO REMAIN.
X17	CAP EXISTING DUCT TO REMAIN.
X18	REMOVE BRANCH PIPING AS SHOWN. CAP UNUSED PIPING AT MAIN.



2 FIRST FLOOR - DEMOLITION - AREA C UPPER
1/8" = 1'-0"



1 FIRST FLOOR - DEMOLITION - AREA C LOWER
1/8" = 1'-0"

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DEMOLITION - FIRST FLOOR - AREA C

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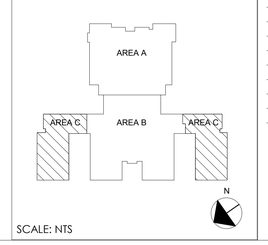
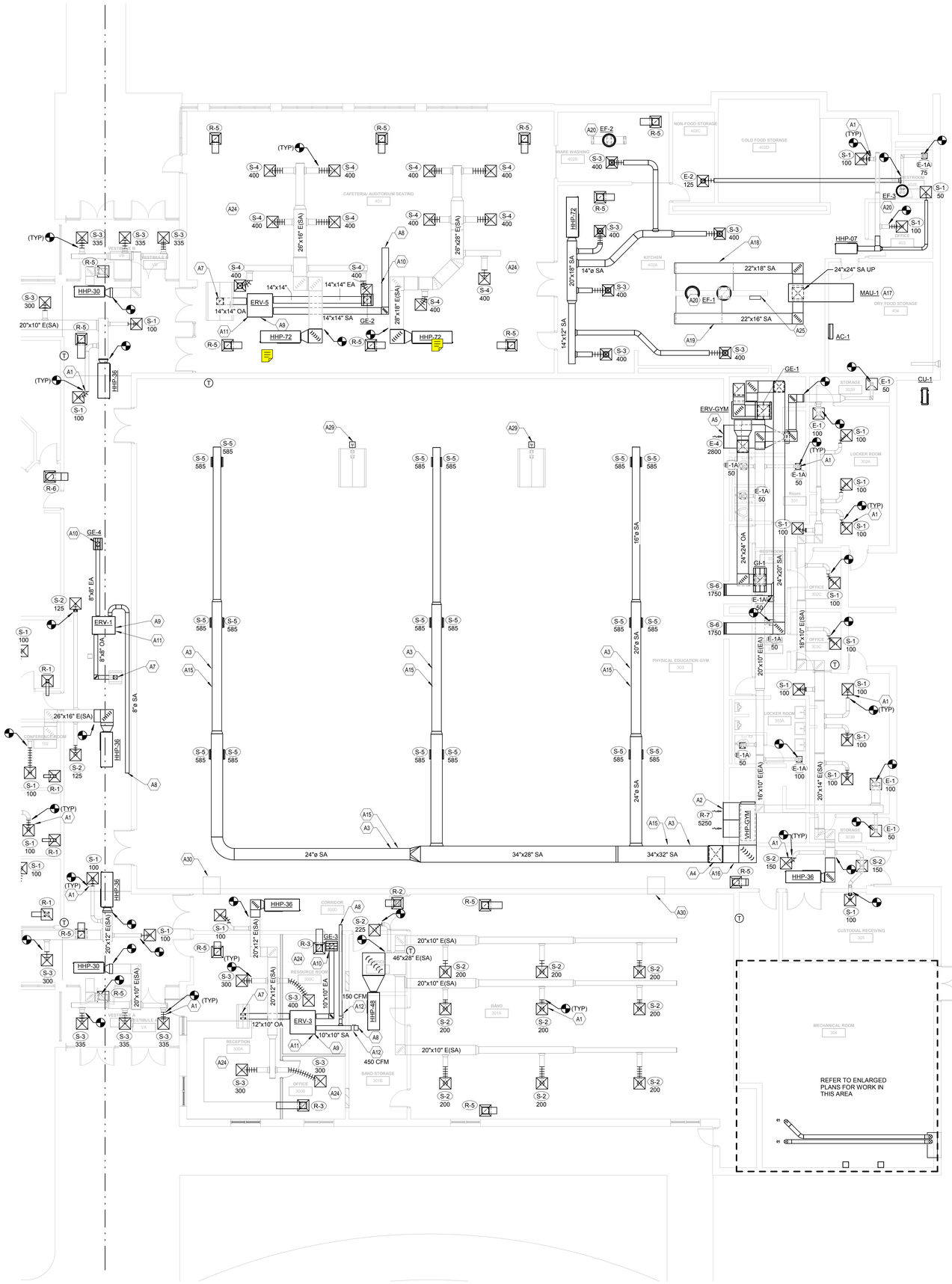
KEY PLAN



SCALE: NTS

REVISIONS

M2.2



1 FIRST FLOOR - AIR DISTRIBUTION PLAN - AREA A
1/8" = 1'-0"

TAGGED NOTES

A1	CONNECT NEW FLEXIBLE DUCT TO EXISTING BRANCH DUCT. UNLESS NOTED OTHERWISE, THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
A2	MOUNT BOTTOM OF GRILLE 2' 0" AFF.
A3	ROUTE DUCTWORK THROUGH JOIST SPACE. FIELD COORDINATE EXACT LOCATIONS WITH STRUCTURE AND OTHER EXISTING COMPONENTS.
A4	ROUTE DUCT THROUGH WALL ABOVE ENTRY OPENING AND ROUTE UP INTO ROOF STRUCTURE. FIELD VERIFY EXACT ROUTE.
A5	MOUNT BOTTOM OF GRILLE 8" AFF.
A7	ROUTE DUCT UP TO EXISTING INTAKE HOOD ON ROOF.
A8	DISCHARGE OPEN DUCT INTO PLENUM SPACE.
A9	COORDINATE LOCATION OF UNIT WITH CEILING GRID SO THAT ALL ACCESS DOORS CAN BE OPENED FULLY.
A10	ROUTE DUCT UP TO NEW EXHAUST HOOD ON ROOF.
A11	MAINTAIN CLEARANCE TO RETURN AIR OPENING ON UNIT.
A12	INSTALL MANUAL BALANCE DAMPERS IN DUCT AS SHOWN.
A15	DUCTWORK TO BE DOUBLE WALL INSULATED DUCT WITH PRIMER PAINT FINISH.
A16	TRANSITION TO DOUBLE WALL DUCT ABOVE CEILING PRIOR TO PENETRATING WALL.
A17	MOUNT MAKE-UP AIR UNIT ON ROOF. PROVIDE CURB FOR SLOPED ROOF AND MODIFY ROOF AS NECESSARY TO MAKE A WATER-TIGHT INSTALLATION.
A18	PROVIDE 10' LONG X 22" WIDE X 6" HIGH STAINLESS STEEL PLENUM SUPPLY IN FRONT OF EXISTING HOOD. CONNECT TO DUCT ABOVE WITH (4) 20" Ø CONNECTIONS WITH INDIVIDUAL BALANCE DAMPERS.
A19	PROVIDE 8' LONG X 22" WIDE X 6" HIGH STAINLESS STEEL PLENUM SUPPLY IN FRONT OF EXISTING HOOD. CONNECT TO DUCT ABOVE WITH (3) 20" Ø CONNECTIONS WITH INDIVIDUAL BALANCE DAMPERS.
A20	MOUNT FAN ON EXISTING CURB. PROVIDE CURB ADAPTOR AS REQUIRED.
A24	DIFFUSERS AND FLEXIBLE DUCTWORK IN THIS SPACE TO BE INCLUDED IN BASE BID.
A25	NEW KITCHEN HOOD CONTROL PANEL LOCATION.
A29	PROVIDE NEW MOTORIZED DAMPER IN THROAT OF EXISTING HOOD. INTERLOCK WITH EXISTING EXHAUST FANS.
A30	EXISTING EXHAUST FANS IN WALL.

R,G,D RUNOUT SCHEDULE

MARK	DUCT BRANCH SIZE
E-1	6"Ø
E-1A	6"Ø
E-2	8"Ø
E-3	10"Ø
E-4	48"X24"
E-5	8"X6"
R-1	6"Ø
R-2	8"Ø
R-3	10"Ø
R-4	12"Ø
R-5	14"Ø
R-6	16"Ø
R-7	36"X48"
S-1	6"Ø
S-2	8"Ø
S-3	10"Ø
S-4	12"Ø
S-5	20"X10"
S-6	24"X18"
T-1	
T-2	8"X6"

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Project Status

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MERCER COUNTY SCHOOLS

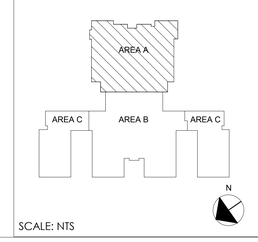
MERCER INTERMEDIATE SCHOOL RENOVATIONS
MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

AIR DISTRIBUTION - FIRST FLOOR - AREA A

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

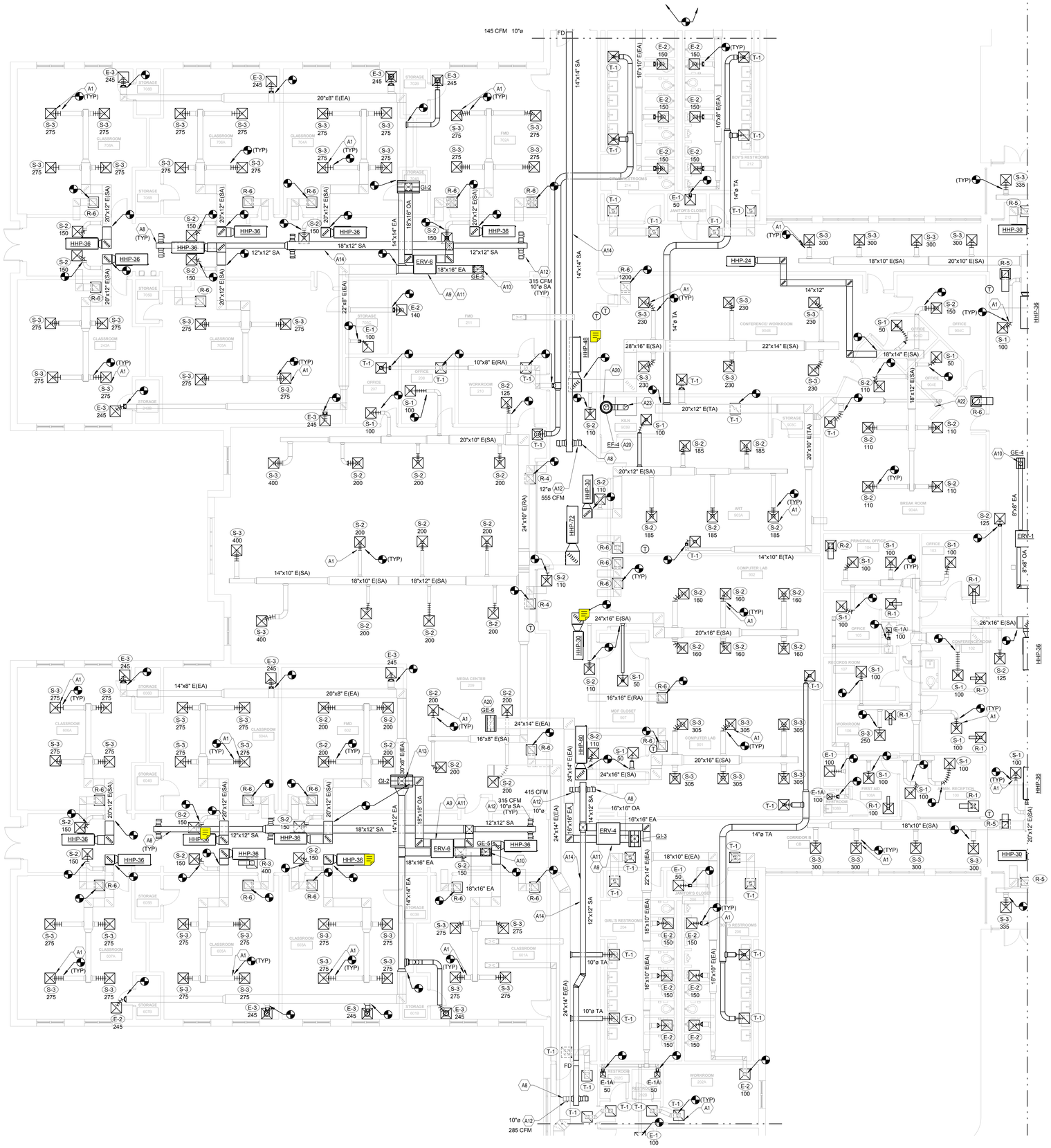
REVISIONS

KEY PLAN



SCALE: NTS

M3.0



1 FIRST FLOOR - AIR DISTRIBUTION PLAN - AREA B
1/8" = 1'-0"

TAGGED NOTES	
A1	CONNECT NEW FLEXIBLE DUCT TO EXISTING BRANCH DUCT. UNLESS NOTED OTHERWISE, THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
A8	DISCHARGE OPEN DUCT INTO PLENUM SPACE.
A9	COORDINATE LOCATION OF UNIT WITH CEILING GRID SO THAT ALL ACCESS DOORS CAN BE OPENED FULLY.
A10	ROUTE DUCT UP TO NEW EXHAUST HOOD ON ROOF.
A11	MAINTAIN CLEARANCE TO RETURN AIR OPENING ON UNIT.
A12	INSTALL MANUAL BALANCE DAMPERS IN DUCT AS SHOWN.
A13	ROUTE DUCT UP TO NEW INTAKE HOOD ON EXISTING CURB.
A14	ROUTE NEW DUCT IN PLENUM UP HIGH.
A20	MOUNT FAN ON EXISTING CURB. PROVIDE CURB ADAPTOR AS REQUIRED.
A22	CAP DRYER DUCT AT WALL.
A23	CONNECT EXHAUST DUCT TO EXISTING KILN HOOD.

R,G,D RUNOUT SCHEDULE

MARK	DUCT BRANCH SIZE
E-1	6"Ø
E-1A	6"Ø
E-2	8"Ø
E-3	10"Ø
E-4	48"X24"
E-5	8"X6"
R-1	6"Ø
R-2	8"Ø
R-3	10"Ø
R-4	12"Ø
R-5	14"Ø
R-6	16"Ø
R-7	36"X48"
S-1	6"Ø
S-2	8"Ø
S-3	10"Ø
S-4	12"Ø
S-5	20"X10"
S-6	24"X18"
T-1	-
T-2	8"X6"

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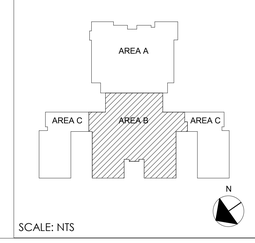
HARRODSBURG, KENTUCKY

AIR DISTRIBUTION - FIRST FLOOR - AREA B

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

REVISIONS

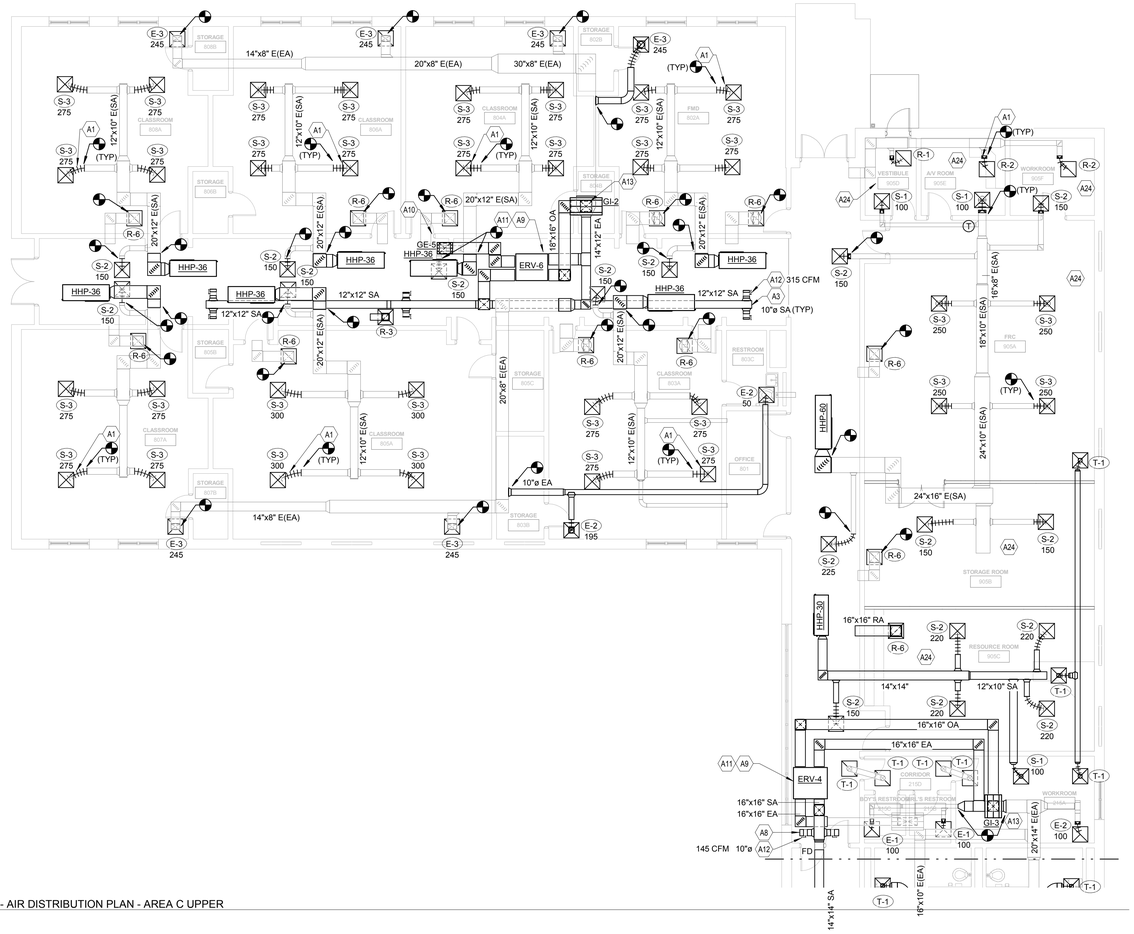
KEY PLAN



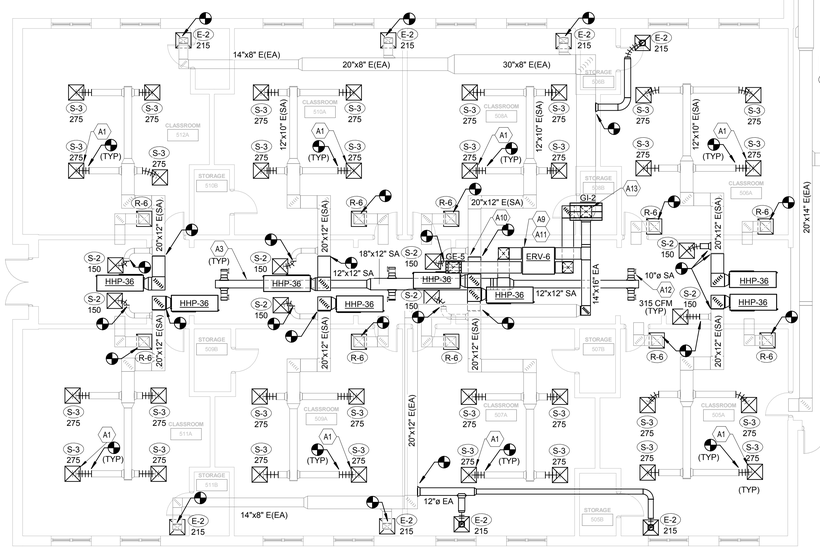
SCALE: NTS

M3.1

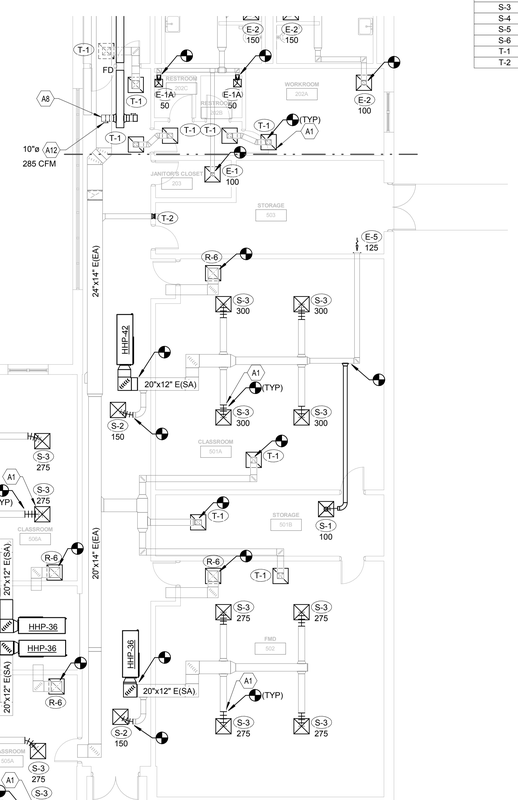
TAGGED NOTES	##
A1	CONNECT NEW FLEXIBLE DUCT TO EXISTING BRANCH DUCT. UNLESS NOTED OTHERWISE, THIS SCOPE IS PART OF ALTERNATE #2 - GRILLE REPLACEMENT.
A3	ROUTE DUCTWORK THROUGH JOIST SPACE. FIELD COORDINATE EXACT LOCATIONS WITH STRUCTURE AND OTHER EXISTING COMPONENTS.
A8	DISCHARGE OPEN DUCT INTO PLENUM SPACE.
A9	COORDINATE LOCATION OF UNIT WITH CEILING GRID SO THAT ALL ACCESS DOORS CAN BE OPENED FULLY.
A10	ROUTE DUCT UP TO NEW EXHAUST HOOD ON ROOF.
A11	MAINTAIN CLEARANCE TO RETURN AIR OPENING ON UNIT.
A12	INSTALL MANUAL BALANCE DAMPERS IN DUCT AS SHOWN.
A13	ROUTE DUCT UP TO NEW INTAKE HOOD ON EXISTING CURB.
A24	DIFFUSERS AND FLEXIBLE DUCTWORK IN THIS SPACE TO BE INCLUDED IN BASE BID.



2 FIRST FLOOR - AIR DISTRIBUTION PLAN - AREA C UPPER
1/8" = 1'-0"



1 FIRST FLOOR - AIR DISTRIBUTION PLAN - AREA C LOWER
1/8" = 1'-0"



R,G,D RUNOUT SCHEDULE

MARK	DUCT BRANCH SIZE
E-1	6"Ø
E-1A	6"Ø
E-2	8"Ø
E-3	10"Ø
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E-5	8"X6"
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R-2	8"Ø
R-3	10"Ø
R-4	12"Ø
R-5	14"Ø
R-6	16"Ø
R-7	36"X48"
S-1	6"Ø
S-2	8"Ø
S-3	10"Ø
S-4	12"Ø
S-5	20"X10"
S-6	24"X18"
T-1	
T-2	8"X6"

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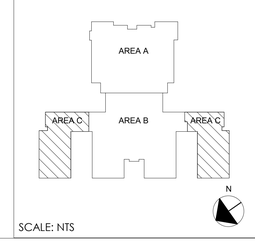
HARRODSBURG, KENTUCKY

AIR DISTRIBUTION - FIRST FLOOR - AREA C

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

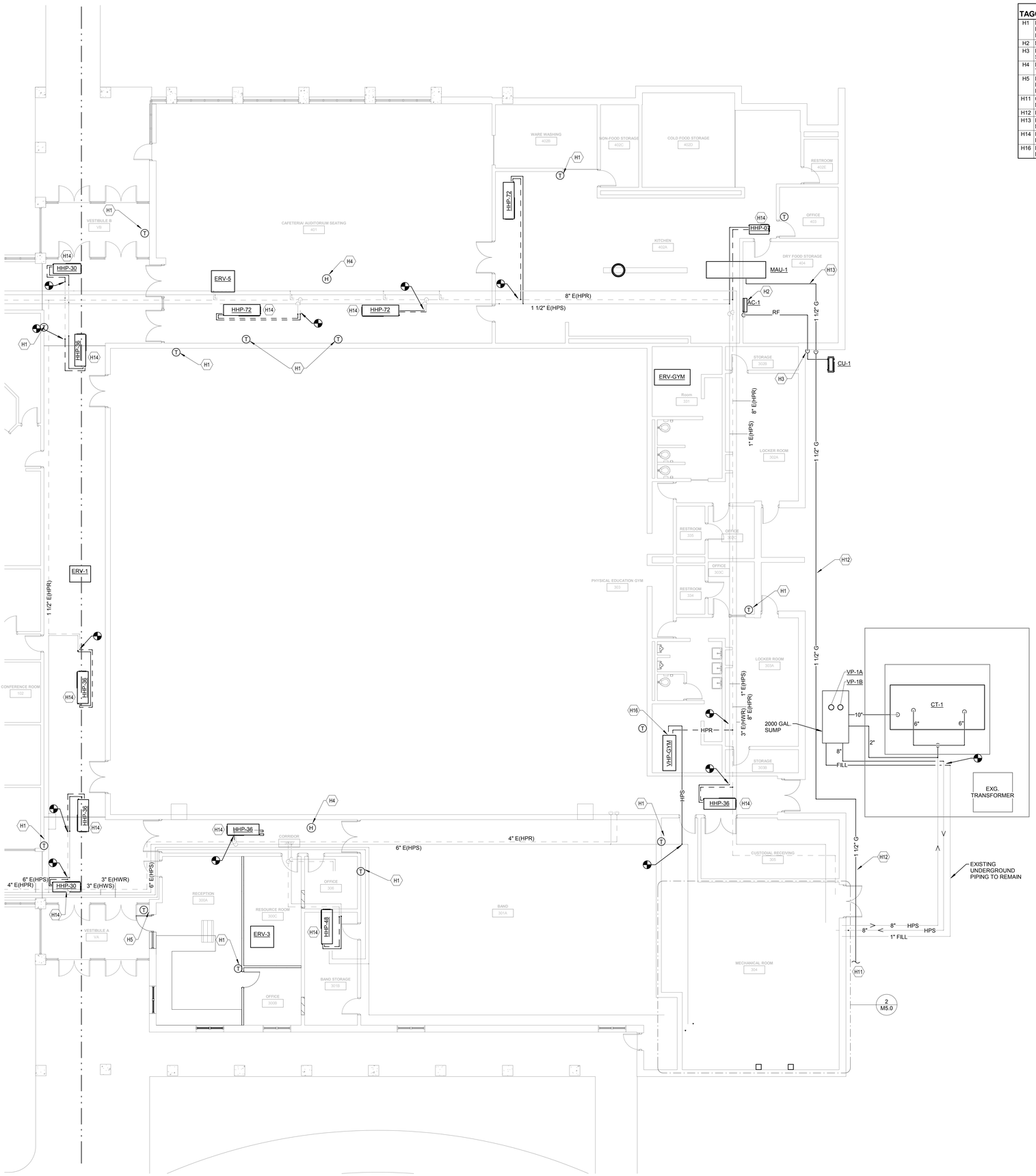
REVISIONS

KEY PLAN



SCALE: NTS

M3.2



1 FIRST FLOOR - HYDRONICS PLAN - AREA A
1/8" = 1'-0"

TAGGED NOTES

H1	INSTALL NEW THERMOSTAT IN PLACE OF EXISTING. REVISE EXISTING JUNCTION BOX IN WALL AND INSTALL THERMOSTAT IN ACCORDANCE WITH COORDINATION DETAIL.
H2	MOUNT UNIT ON WALL 7' 6"AFF.
H3	ROUTE REFRIGERANT PIPING EXPOSED DOWN WALL TO CU-1. SIZE PIPING PER MANUFACTURER RECOMMENDATIONS.
H4	LOCATE HUMIDITY SENSOR IN CEILING PLENUM AND CONNECT TO NEW CONTROL SYSTEM.
H5	LOCATION OF NEW THERMOSTAT. PROVIDE SURFACE RACEWAY UP TO ABOVE CEILING FOR CONNECTION TO EQUIPMENT.
H11	CONNECT 1-1/2" GAS TO BUILDING SIDE OF EXISTING GAS METER/REGULATOR IN THIS LOCATION.
H12	ROUTE NEW GAS PIPING BELOW GRADE.
H13	ROUTE NEW GAS UP SIDE OF BUILDING, ONTO ROOF AND TO NEW MAU-1.
H14	INSTALL HEAT PUMP IN PLACE OF EXISTING AND CONNECT TO EXISTING HPS/R AND CONDENSATE PIPING.
H16	DISCHARGE CONDENSATE FROM UNIT INTO EXISTING FLOOR DRAIN.

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HYDRONICS - FIRST FLOOR - AREA A

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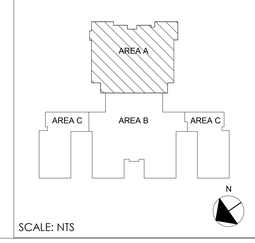
REVISIONS

KEY PLAN

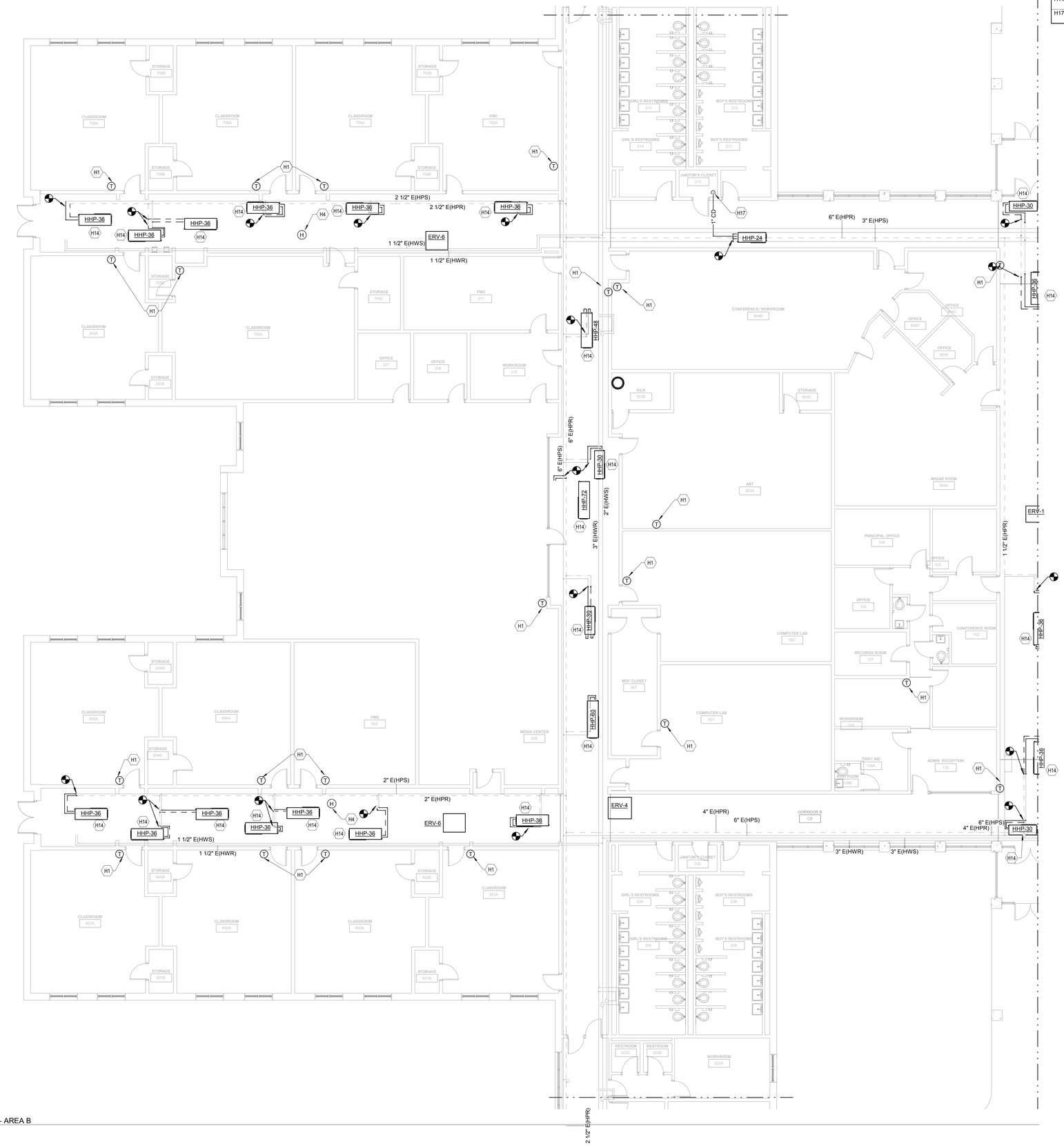


SCALE: NTS

M4.0

TAGGED NOTES

H1	INSTALL NEW THERMOSTAT IN PLACE OF EXISTING. REVISE EXISTING JUNCTION BOX IN WALL AND INSTALL THERMOSTAT IN ACCORDANCE WITH COORDINATION DETAIL.
H4	LOCATE HUMIDITY SENSOR IN CEILING PLENUM AND CONNECT TO NEW CONTROL SYSTEM.
H14	INSTALL HEAT PUMP IN PLACE OF EXISTING AND CONNECT TO EXISTING HPS/R AND CONDENSATE PIPING.
H17	DISCHARGE CONDENSATE DRAIN INTO EXISTING JANITOR SINK.



1 FIRST FLOOR - HYDRONICS PLAN - AREA B
1/8" = 1'-0"

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HYDRONICS - FIRST FLOOR - AREA B

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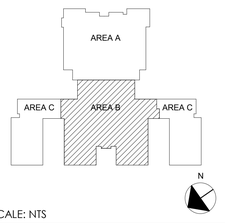
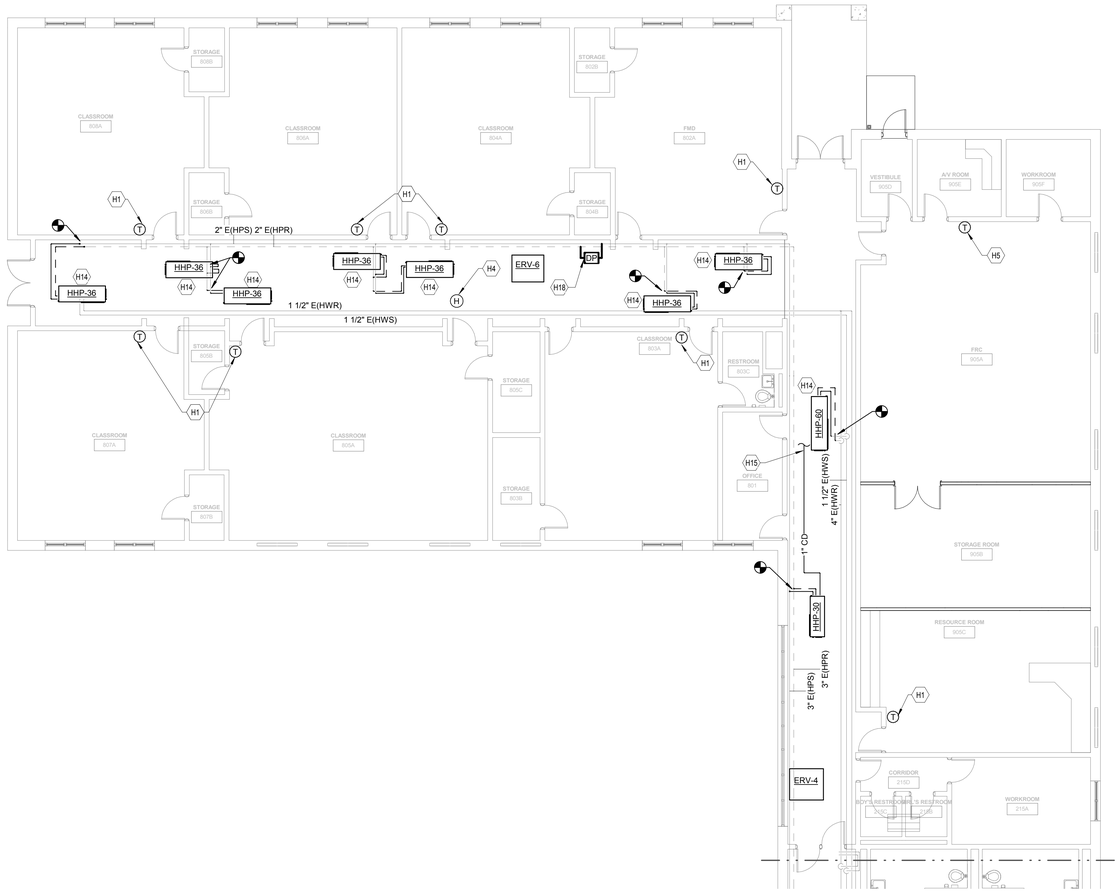
KEY PLAN



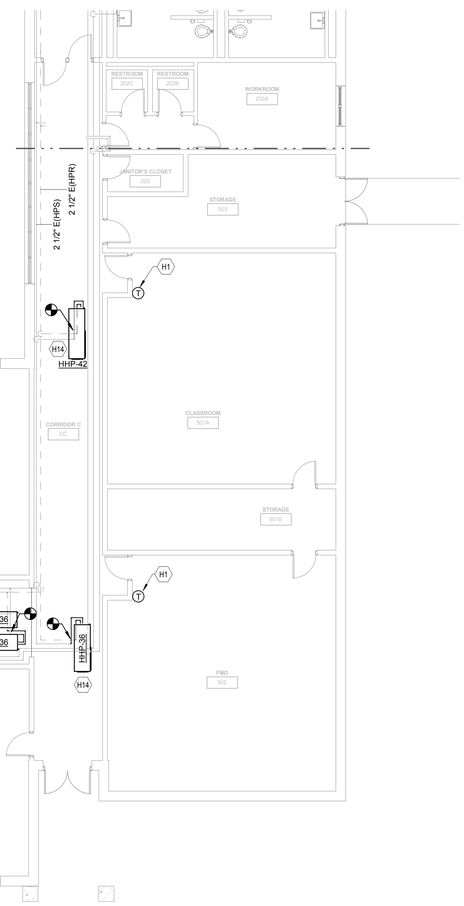
SCALE: NTS

M4.1

TAGGED NOTES	
H1	INSTALL NEW THERMOSTAT IN PLACE OF EXISTING. REVISE EXISTING JUNCTION BOX IN WALL AND INSTALL THERMOSTAT IN ACCORDANCE WITH COORDINATION DETAIL.
H4	LOCATE HUMIDITY SENSOR IN CEILING PLENUM AND CONNECT TO NEW CONTROL SYSTEM.
H5	LOCATION OF NEW THERMOSTAT. PROVIDE SURFACE RACEWAY UP TO ABOVE CEILING FOR CONNECTION TO EQUIPMENT.
H14	INSTALL HEAT PUMP IN PLACE OF EXISTING AND CONNECT TO EXISTING HPS/R AND CONDENSATE PIPING.
H15	CONNECT CD TO EXISTING CONDENSATE PIPING FOR EXISTING HEAT PUMP. FIELD VERIFY LOCATION.
H18	INSTALL DIFFERENTIAL PRESSURE SWITCH IN THIS LOCATION TO CONTROL LOOP PUMPS.



2 FIRST FLOOR - HYDRONICS PLAN - AREA C UPPER
1/8" = 1'-0"



1 FIRST FLOOR - HYDRONICS PLAN - AREA C LOWER
1/8" = 1'-0"

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HYDRONICS - FIRST FLOOR - AREA C

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DRAWN:	JEA
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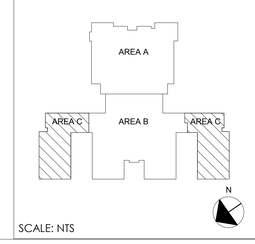
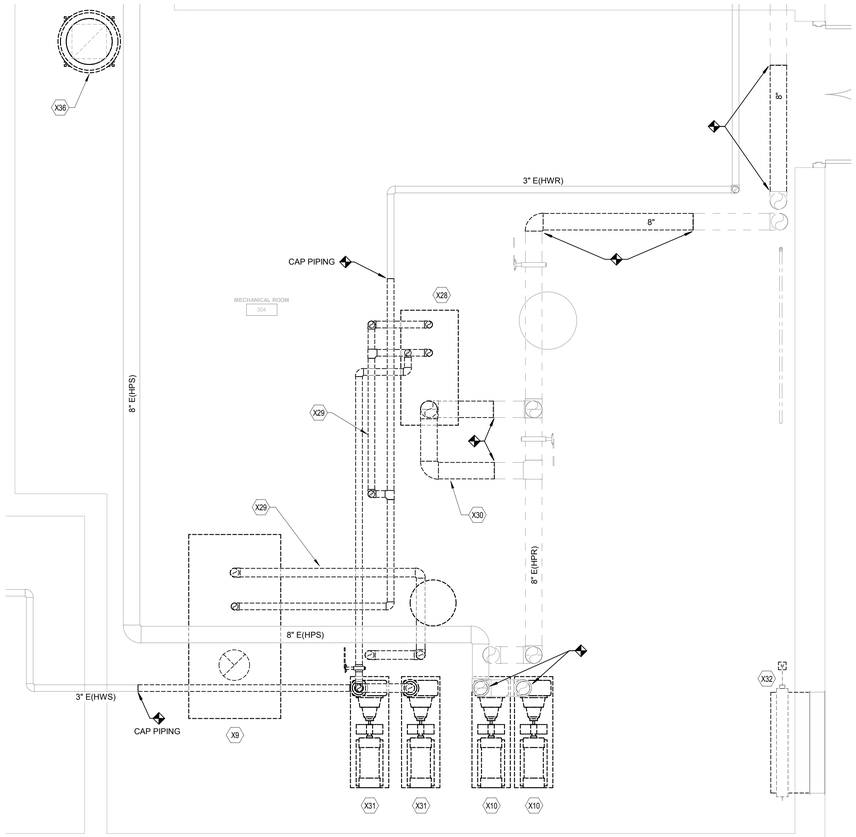
REVISIONS

KEY PLAN

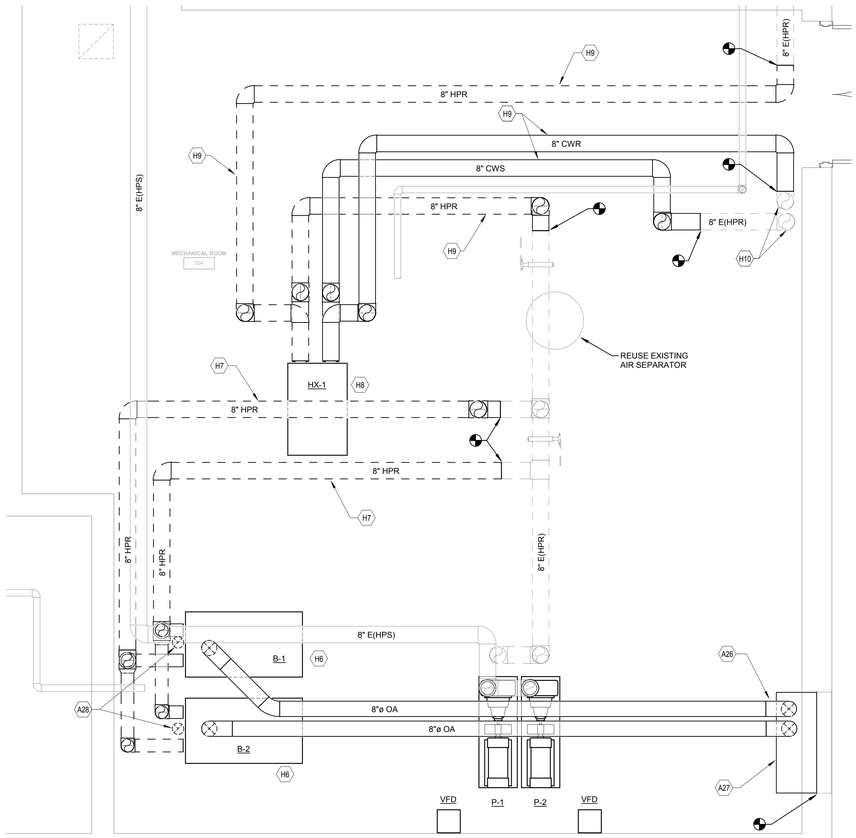


SCALE: NTS

M4.2



1 ENLARGED MECHANICAL ROOM - DEMOLITION
3/8" = 1'-0"



2 ENLARGED MECHANICAL ROOM - NEW WORK
3/8" = 1'-0"

TAGGED NOTES

A26	ROUTE 8" COMBUSTION AIR INTAKE FROM PLENUM TO EACH BOILER. INSTALL PER MANUFACTURER INSTRUCTIONS. SCOPE IS PART OF ALTERNATE #1 - BOILER REPLACEMENT ONLY.
A27	PROVIDE INSULATED SHEET METAL PLENUM BEHIND EXISTING LOUVER. SLOPE BOTTOM OF LOUVER TO DRAIN WATER TOWARDS THE LOUVER.
A28	ROUTE 6" FLUE FROM BOILER AND PENETRATE ROOF AT EXISTING FLUE LOCATION. SCOPE IS PART OF ALTERNATE #1 - BOILER REPLACEMENT ONLY.
H6	INSTALL NEW BOILERS AND PIPING AS PART OF ALTERNATE #1 - BOILER REPLACEMENT ONLY. REFER TO SCHEMATIC DIAGRAM FOR ADDITIONAL INFORMATION.
H7	INSTALL NEW PIPING AS PART OF ALTERNATE #1 - BOILER REPLACEMENT ONLY. CONNECT TO EXISTING PIPING AS SHOWN. REFER TO SCHEMATIC DIAGRAM FOR ADDITIONAL INFORMATION.
H8	INSTALL PLATE AND FRAME HEAT EXCHANGER AND PIPING AS PART OF BASE BID WORK.
H9	INSTALL PIPING AS PART OF BASE BID WORK.
H10	REUSE EXISTING PIPING UNDERGROUND OUT TO COOLING TOWER. REFER TO SCHEMATIC DIAGRAM FOR ADDITIONAL INFORMATION.
X9	REMOVE EXISTING BOILER AS PART OF PRICING ALTERNATE. REFER TO HYDRONIC DEMOLITION SCHEMATIC FOR ADDITIONAL INFORMATION.
X10	REMOVE EXISTING BASE MOUNTED PUMPS COMPLETELY. REFER TO HYDRONIC DEMOLITION SCHEMATIC FOR ADDITIONAL INFORMATION.
X28	REMOVE EXISTING HEAT EXCHANGER AS PART OF ALTERNATE #2 - BOILER REPLACEMENT ONLY.
X29	REMOVE EXISTING HOT WATER PIPING AS PART OF ALTERNATE #2 - BOILER REPLACEMENT ONLY.
X30	REMOVE EXISTING HEAT PUMP LOOP PIPING AS PART OF ALTERNATE #2 - BOILER REPLACEMENT ONLY.
X31	REMOVE EXISTING BASE MOUNTED PUMPS COMPLETELY AS PART OF ALTERNATE #2 - BOILER REPLACEMENT ONLY.
X32	REMOVE EXISTING DAMPERS AND ACTUATORS ON INTAKE LOUVER. EXISTING LOUVER TO REMAIN.
X36	REMOVE EXISTING EXHAUST FAN ON ROOF. CAP EXISTING CURB WITH INSULATED SHEET METAL CAP SLOPED TO SHED WATER.

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ENLARGED PLANS

PROJECT #:	XMKM18
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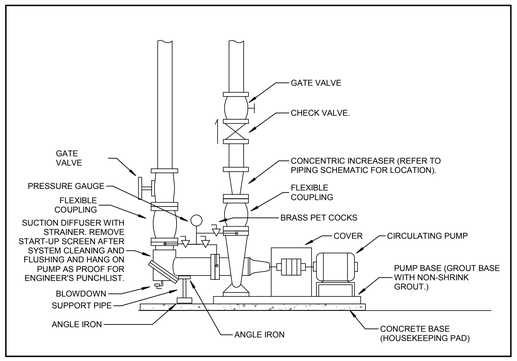
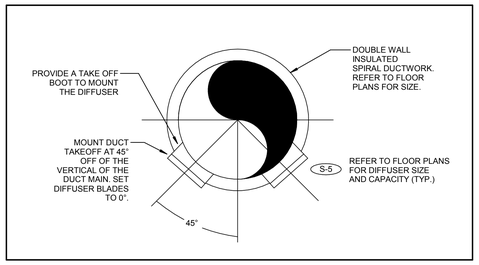
REVISIONS

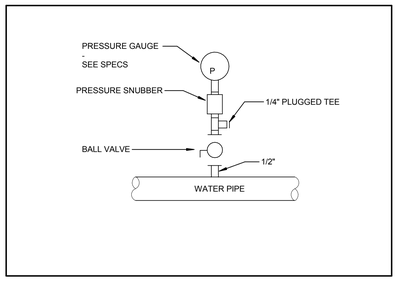
M5.0



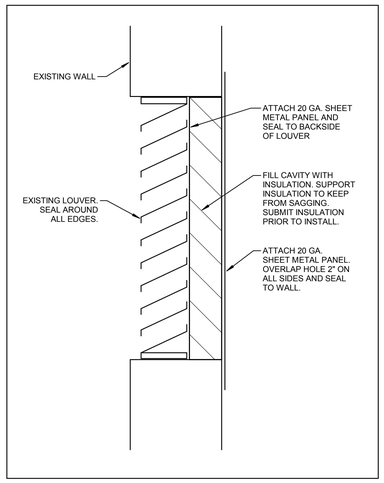
4 BASE MOUNTED PUMP PIPING DETAIL
NOT TO SCALE



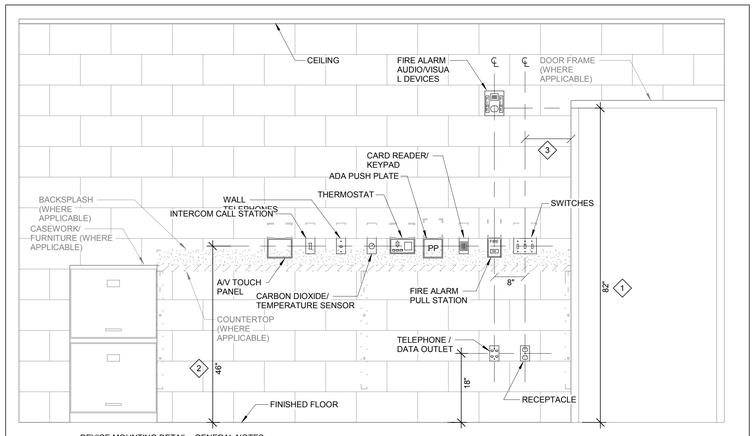
3 REGISTER DUCT TAKEOFF DETAIL
NOT TO SCALE



2 WATER PRESSURE GAUGE INSTALLATION
NOT TO SCALE



1 LOUVER PANEL DETAIL
1/8" = 1'-0"



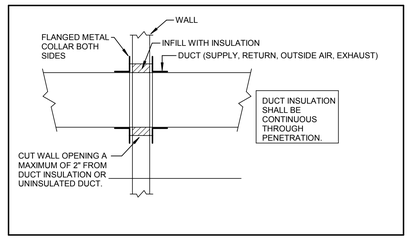
DEVICE MOUNTING DETAIL - GENERAL NOTES:

A. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN TO BE MOUNTED AT A SIMILAR HEIGHT, ALIGN HORIZONTALLY ALONG CENTERLINE OF DEVICE BACKBOX (AS SHOWN IN DETAIL AND DESCRIBED IN KEY NOTE #2).
B. WHERE DEVICES OF ANY DISCIPLINE ARE LOCATED IN THE SAME GENERAL AREA ON THE PLANS AND ARE SHOWN MOUNTED AT DIFFERENT HEIGHTS, ALIGN VERTICALLY ALONG THE CENTERLINE OF THE DEVICE BACKBOX (AS SHOWN IN DETAIL).
C. FOR ANY WALL OTHER THAN PAINTED GYPSUM BOARD OR CMU, DEVICE LOCATIONS MUST BE FIELD APPROVED BY ENGINEER OR ARCHITECT PRIOR TO INSTALLATION OF FINISHES.

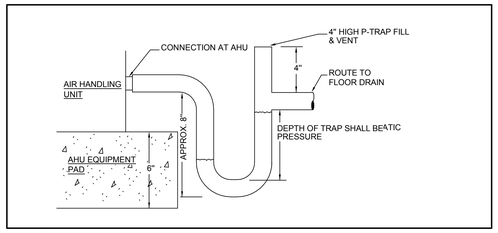
DEVICE MOUNTING DETAIL - KEY NOTES: X

1. MOUNT VISUAL NOTIFICATION APPLIANCES SO THAT ENTIRE LENS IS BETWEEN 80" AND 96" AFF. IF CEILING IS TOO LOW FOR DEVICE TO BE MOUNTED ABOVE 80", MOUNT SO THAT THE LENS IS WITHIN 6" OF FINISHED CEILING.
2. THE CONTRACTOR IS TO COORDINATE ALL ROUGH-INS WITH ANY COUNTERTOPS/BACKSPLASHES TO AVOID CONFLICT. WHENEVER THE TYPICAL DEVICE MOUNTING HEIGHT SHOWN CAUSES CONFLICT WITH A COUNTERTOP/BACKSPLASH, ALIGN DEVICE BACKBOXES IN THE BOTTOM OF THE NEXT FULL BLOCK ABOVE THE BACKSPLASH AS SHOWN BY THE DOTTED LINES. FOR NON-BLOCK WALLS ALIGN CENTERLINE OF DEVICE BACKBOXES 4" ABOVE BACKSPLASH. COORDINATE WORK WITH CASEWORK AND KITCHEN SHOP DRAWINGS ACCORDINGLY. IF CONFLICT STILL ARISES CONTACT THE ENGINEER FOR DIRECTION ON HOW TO PROCEED.
3. MOUNTING HEIGHTS SHOWN ILLUSTRATE DESIGN INTENT AND ARE TO BE FOLLOWED UNLESS CONTRADICTED BY APPLICABLE CODE. WHERE DEVICES ARE SHOWN ADJACENT TO DOOR FRAMES ON PLANS INSTALL 12" FROM FRAME TO AVOID SLUSHED SECTIONS. SPECIFIC DEVICES ARE SHOWN IN RELATIVE ORDER FROM DOOR FRAME; WHERE THESE DEVICES ARE NOT PRESENT AT A PARTICULAR LOCATION, ADJUST LOCATIONS CLOSER TO DOOR ACCORDINGLY.

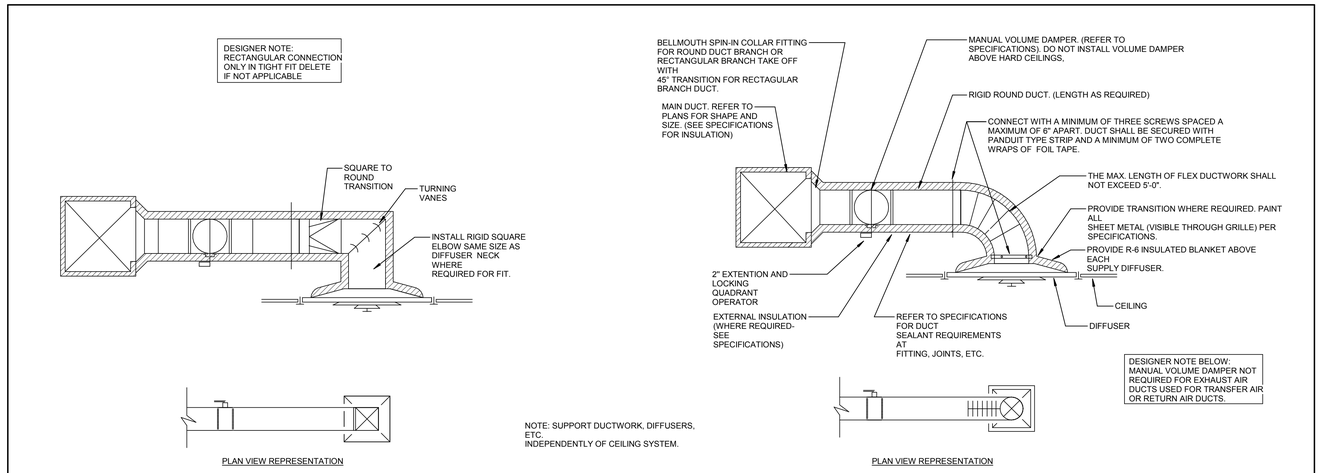
8 TYPICAL WALL DEVICE MOUNTING DETAIL
NO SCALE



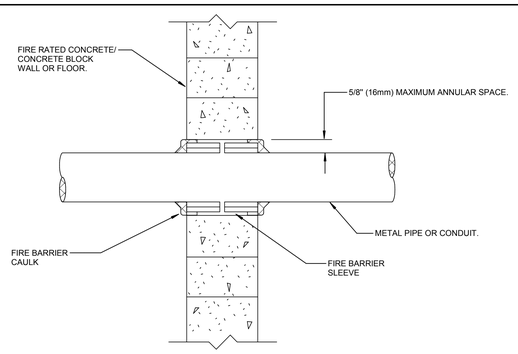
6 DUCT PENETRATION THROUGH NON-RATED WALL DETAIL
NOT TO SCALE



5 TYPICAL AIR HANDLER CONDENSATE DRAIN TRAP DETAIL
NOT TO SCALE



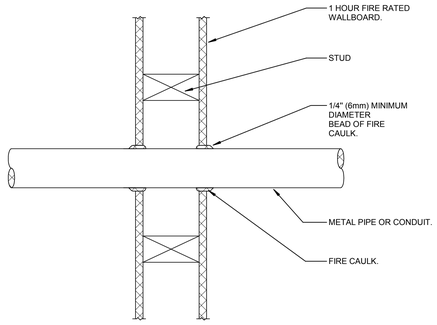
7 TYPICAL BRANCH DUCT DETAIL(SUPPLY, RETURN, AND EXHAUST)
NOT TO SCALE



NOTES

1. THE MAXIMUM ANNULAR SPACE AROUND THE METAL PIPE OR CONDUIT IS 5/8" (16mm). (IF THE ANNULAR SPACE EXCEEDS 5/8" PATCH THE WALL AND PENETRATE WALL AT ANOTHER LOCATION).
2. WRAP THE 3M MODEL# FS-195 WRAP/STRIP AROUND THE PIPE/CONDUIT, FOIL SIDE OUT, TO FILL THE SPACE BETWEEN THE PIPE/CONDUIT AND THE WALL OPENING. THE 3M MODEL# FS-195 WRAP/STRIP SHOULD BE TIGHTLY SECURED WITH ALUMINUM FOIL TAPE OR STEEL TIE WIRE AND PUSHED INTO THE OPENING UNTIL THE TOP EDGE OF THE WRAP IS FLUSH WITH THE WALL SURFACE. THE IDENTICAL INSTALLATION SHOULD BE INSTALLED ON THE OTHER SIDE OF THE WALL.
3. USE 3M MODEL# CP 25N/S(NO SAG) CAULK TO FILL THE AREA BETWEEN THE FS-195 WRAP/STRIP AND THE EDGES OF THE OPENING AND ANY VOIDS IN THE 3M MODEL# FS-195 WRAP/STRIP. A FILLM OF CP 25 CAULK SHOULD COAT ALL EXPOSED EDGES OF THE FS-195 WRAP/STRIP AND COMPLETELY SEAL THE AREA BETWEEN THE FS-195 WRAP/STRIP, THE PIPE/CONDUIT AND THE WALL SURFACE.
4. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED, ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS.
5. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT ENGINEER TO ADVISE OF THE DATE AND TIME OF THIS MEETING.
6. ALL PENETRATIONS WILL BE REVIEWED BY THE ENGINEER PRIOR TO INSPECTION ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.

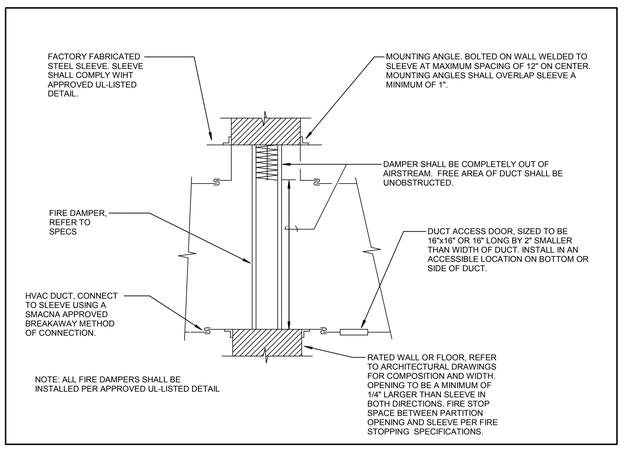
11 PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH A CONCRETE WALL
NOT TO SCALE



NOTES

1. FORCE THE CAULK INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.
2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.
3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm). (IF IT DOES PATCH WALL AND PENETRATE WALL AT ANOTHER LOCATION).
4. INSTALL THE FIRESTOP ON BOTH SIDES OF THE WALL.
5. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED, ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS.
6. ALL PENETRATIONS WILL BE REVIEWED BY THE ENGINEER. PRIOR TO INSPECTION ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.

10 PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH ONE HOUR WALL
NOT TO SCALE



9 FIRE DAMPER DETAIL
NOT TO SCALE

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Project Status

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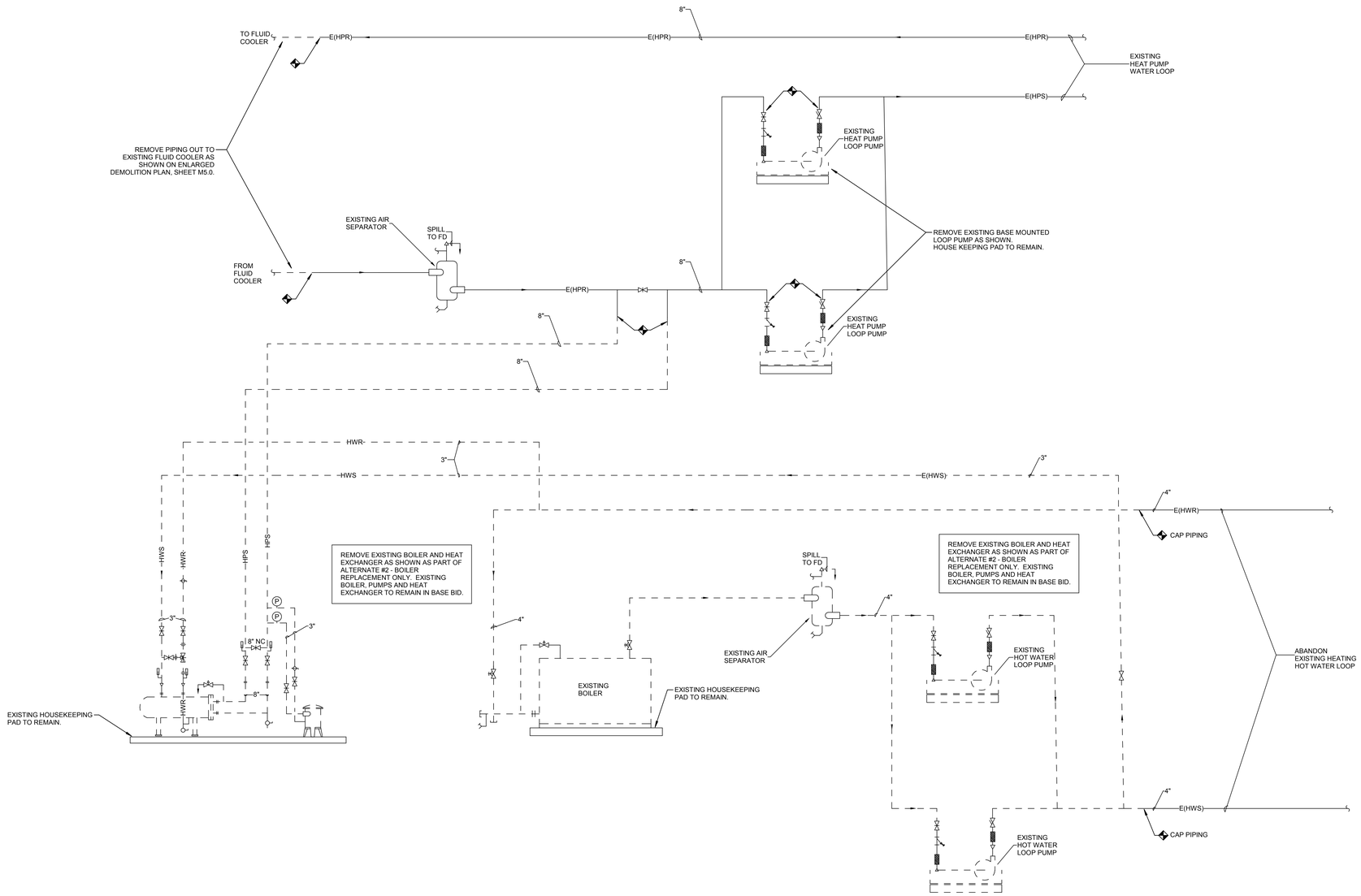
MERCER INTERMEDIATE SCHOOL RENOVATIONS
MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

MECHANICAL DETAILS

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

REVISIONS

M5.1



1 HYDRONIC PIPING SCHEMATIC DEMOLITION
NOT TO SCALE

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MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

MECHANICAL SCHEMATICS DEMO

PROJECT #:	XMKM18
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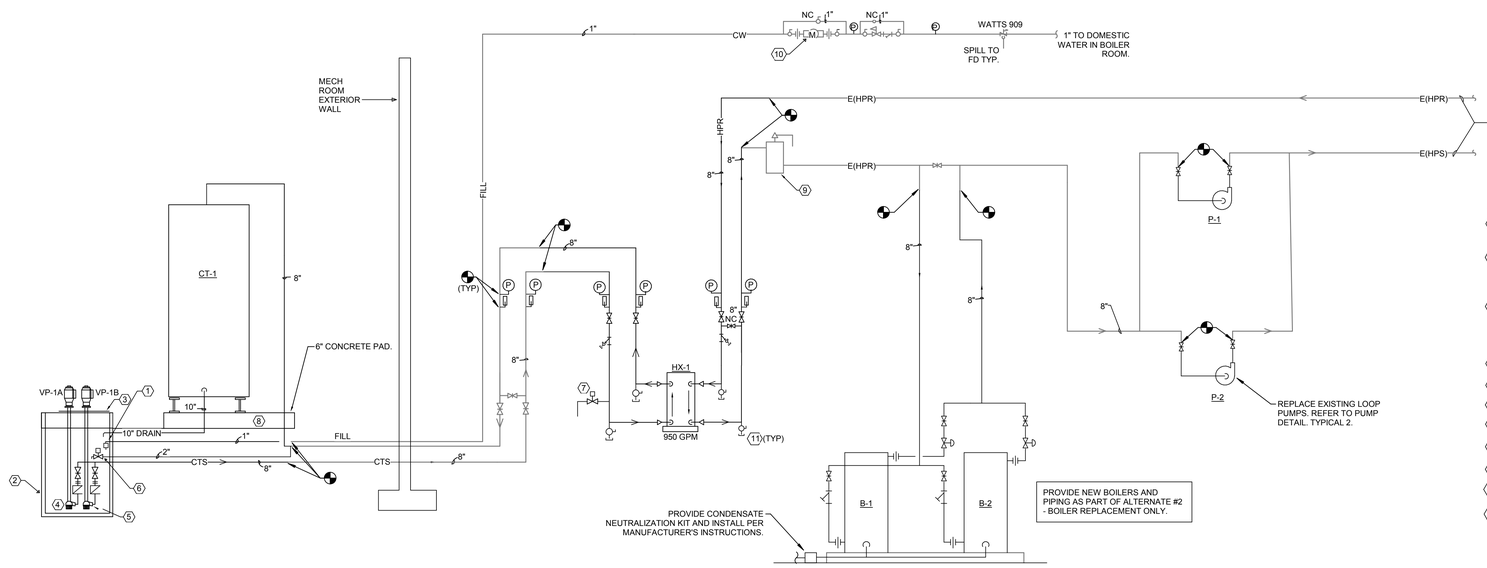
CHECKED:	ADS

REVISIONS

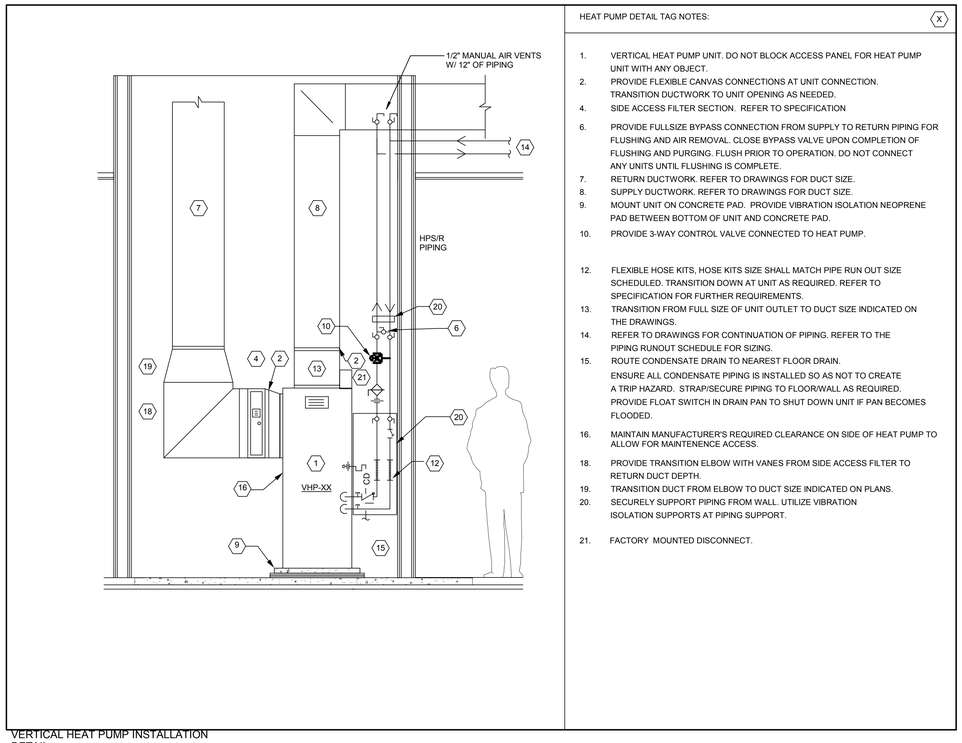
M6.0



TAGGED NOTES

1. FILL VALVE. PROVIDE SEPARATE HIGH WATER AND LOW WATER CONTROLS.
2. OLD CASTLE 2000 GALLON PREFAB CONCRETE VAULT. 10' X 5' X 7' DEEP INSIDE. PROVIDE HINGED ALUMINUM ACCESS DOOR AND LADDER FOR ACCESS. PROVIDE SEPARATE OPENING FOR PUMPS INSTALLATION.
3. 1/2" STEEL COVER DESIGNED SPECIFICALLY FOR DUPLEX PUMPS WITH KNOCK-OUTS FOR PUMP IMPELLARS, COLUMN PIPE AND FLOAT CONTROL MOUNTING.
4. HOLD PUMP INLET 6" ABOVE BOTTOM OF TANK.
5. SUCTION BELL STRAINERS ON PUMPS.
6. NORMALLY OPEN DRAIN VALVE.
7. 1/2" N.C. CHEMICAL TREATMENT PURGE VALVE PIPE TO FLOOR DRAIN.
8. EXTEND EXISTING CONCRETE PAD AS REQUIRED FOR NEW TOWER.
9. REUSE EXISTING AIR SEPARATOR
10. WATER METER. CONNECT TO DDC AND REPORT GALLONS PER MONTH TO DDC.
11. 3/4" BALL VALVE WITH HOSE THREADS. PROVIDE WITH BRASS CAP FOR DRAINS.

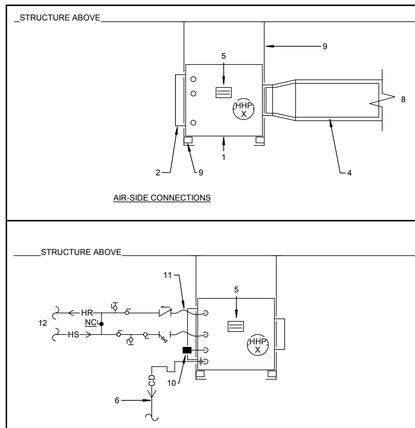
1 HYDRONIC PIPING SCHEMATIC NEW WORK
NOT TO SCALE



HEAT PUMP DETAIL TAG NOTES: X

1. VERTICAL HEAT PUMP UNIT. DO NOT BLOCK ACCESS PANEL FOR HEAT PUMP UNIT WITH ANY OBJECT.
2. PROVIDE FLEXIBLE CANVAS CONNECTIONS AT UNIT CONNECTION. TRANSITION DUCTWORK TO UNIT OPENING AS NEEDED.
4. SIDE ACCESS FILTER SECTION. REFER TO SPECIFICATION
6. PROVIDE FULLSIZE BYPASS CONNECTION FROM SUPPLY TO RETURN PIPING FOR FLUSHING AND AIR REMOVAL. CLOSE BYPASS VALVE UPON COMPLETION OF FLUSHING AND PURGING. FLUSH PRIOR TO OPERATION. DO NOT CONNECT ANY UNITS UNTIL FLUSHING IS COMPLETE.
7. RETURN DUCTWORK. REFER TO DRAWINGS FOR DUCT SIZE.
8. SUPPLY DUCTWORK. REFER TO DRAWINGS FOR DUCT SIZE.
9. MOUNT UNIT ON CONCRETE PAD. PROVIDE VIBRATION ISOLATION NEOPRENE PAD BETWEEN BOTTOM OF UNIT AND CONCRETE PAD.
10. PROVIDE 3-WAY CONTROL VALVE CONNECTED TO HEAT PUMP.
12. FLEXIBLE HOSE KITS, HOSE KITS SIZE SHALL MATCH PIPE RUN OUT SIZE SCHEDULED. TRANSITION DOWN AT UNIT AS REQUIRED. REFER TO SPECIFICATION FOR FURTHER REQUIREMENTS.
13. TRANSITION FROM FULL SIZE OF UNIT OUTLET TO DUCT SIZE INDICATED ON THE DRAWINGS.
14. REFER TO DRAWINGS FOR CONTINUATION OF PIPING. REFER TO THE PIPING RUNOUT SCHEDULE FOR SIZING.
15. ROUTE CONDENSATE DRAIN TO NEAREST FLOOR DRAIN. ENSURE ALL CONDENSATE PIPING IS INSTALLED SO AS NOT TO CREATE A TRIP HAZARD. STRAP/SECURE PIPING TO FLOOR/WALL AS REQUIRED. PROVIDE FLOAT SWITCH IN DRAIN PAN TO SHUT DOWN UNIT IF PAN BECOMES FLOODED.
16. MAINTAIN MANUFACTURER'S REQUIRED CLEARANCE ON SIDE OF HEAT PUMP TO ALLOW FOR MAINTENENCE ACCESS.
18. PROVIDE TRANSITION ELBOW WITH VANES FROM SIDE ACCESS FILTER TO RETURN DUCT DEPTH.
19. TRANSITION DUCT FROM ELBOW TO DUCT SIZE INDICATED ON PLANS.
20. SECURELY SUPPORT PIPING FROM WALL. UTILIZE VIBRATION ISOLATION SUPPORTS AT PIPING SUPPORT.
21. FACTORY MOUNTED DISCONNECT.

3 VERTICAL HEAT PUMP INSTALLATION DETAIL
NOT TO SCALE



HEAT PUMP DETAIL TAG NOTES: X

1. HORIZONTAL HEAT PUMP UNIT. DO NOT BLOCK ACCESS PANEL FOR HEAT PUMP UNIT WITH ANY OBJECT. VERIFY ON FLOOR PLANS REQUIRED CONFIGURATION. (STRAIGHT THROUGH OR END SUPPLY OUTLET)
2. PROVIDE UNIT FILTER RACK.
5. IDENTIFICATION PLACARD; REFER TO SPECIFICATION FOR MORE INFORMATION. THE PLACARD SHALL INCLUDE THE ELECTRIC PANEL NAME AND CIRCUIT NUMBER FEEDING THE EQUIPMENT.
6. ROUTE CONDENSATE DRAIN AS INDICATED ON THE FLOOR PLANS. REFER TO RUNOUT SCHEDULE FOR PROPER SIZING.
7. SUPPLY DUCTWORK. REFER TO FLOOR PLANS FOR DUCT SIZE.
8. SUPPORT FROM OVERHEAD STRUCTURE WITH THREADED ROD.
9. PROVIDE VIBRATION ISOLATORS AT UNIT SUPPORT LOCATIONS.
10. PROVIDE CONDENSATE OVERFLOW SENSOR PIPED TO HEAT PUMP CONDENSATE OVERFLOW CONNECTION.
11. FLEXIBLE HOSE KITS, REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
12. REFER TO FLOOR PLANS FOR CONTINUATION OF HPS/R PIPING. REFER TO THE PIPING RUNOUT SCHEDULE FOR PROPER SIZING.

2 HORIZONTAL WSHP INSTALLATION DETAIL
NOT TO SCALE

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Project Status

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MERCER INTERMEDIATE SCHOOL RENOVATIONS
MERCER COUNTY BOARD OF EDUCATION
HARRODSBURG, KENTUCKY

MECHANICAL SCHEMATICS NEW WORK

PROJECT #:	XMKM18
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DRAWN:	JEA
CHECKED:	ADS

REVISIONS

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WATER SOURCE HEAT PUMP SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	NOM. CFM.	ESP (IN-WG.)	GPM	WATER PD (FT-WG)	BLOWER MOTOR HP	COMPRESSORS	STAGES	WEIGHT (LB)	DIMENSIONS (IN) LENGTH	WIDTH	HEIGHT	ELECTRICAL VOLTAGE	PHASE	MCA	MOCP	HEATING CAPACITY (BTU/HR)	HEATING EAT (DB) (°F)	EWT (°F)	HEAT OF ABSORPTION (BTU/HR)	COP (FULL/PARTIAL)	COOLING SENSIBLE CAPACITY (BTU/HR)	TOTAL CAPACITY (BTU/HR)	EAT (DB)	EAT (WB)	EWT (°F)	HEAT OF REJECTION	EER (FULL/PARTIAL)	CONDENSATE PIPE SIZE	GS/GR PIPE SIZE	REMARKS
HHP-07	DAIKIN	WGSH	SINGLE STAGE	250	0.50	2	4.9	0.1	1	1	150	45	22	18	277 V	1	4.1 A	15	9,400	65	60	7,600	5.14	5,600	7,800	75	63	80	9,400	16.2	3/4"	1/2"	ALL
HHP-24	DAIKIN	WGTH	2-STAGE	800	0.70	8	8.6	0.33	2	2	255	64	23	20	480 V	3	7.0 A	15	27,700	65	60	22,400	5.19	19,600	25,700	75	63	80	30,800	17.3	3/4"	3/4"	ALL
HHP-30	DAIKIN	WGTH	2-STAGE	1000	0.70	10	12.8	0.5	2	2	260	64	23	20	480 V	3	9.5 A	15	35,300	65	60	28,300	5.07	22,700	31,300	75	63	80	38,000	15.9	3/4"	3/4"	ALL
HHP-36	DAIKIN	WGTH	2-STAGE	1250	0.70	12	15.2	0.5	2	2	330	73	25	22	480 V	3	11.2 A	15	43,300	65	60	35,200	5.32	28,100	38,300	75	63	80	45,800	17.3	3/4"	3/4"	ALL
HHP-42	DAIKIN	WGTH	2-STAGE	1400	0.70	14	8.2	0.75	2	2	370	79	25	22	480 V	3	13.3 A	15	48,500	65	60	38,800	5.01	31,700	43,300	75	63	80	52,100	16.8	3/4"	1"	ALL
HHP-48	DAIKIN	WGTH	2-STAGE	1600	0.70	16	10.5	0.75	2	2	370	79	25	22	480 V	3	13.5 A	15	54,800	65	60	43,900	5.01	35,800	48,000	75	63	80	57,900	16.5	3/4"	1"	ALL
HHP-60	DAIKIN	WGTH	2-STAGE	2000	0.70	20	17.1	1	2	2	475	84	25	22	480 V	3	15.9 A	20	72,700	65	60	58,100	4.98	45,900	62,300	75	63	80	75,000	16.7	3/4"	1"	ALL
HHP-72	DAIKIN	WGTH	2-STAGE	2160	0.70	24	24.3	1	2	2	480	84	25	22	480 V	3	17.5 A	25	87,500	65	60	69,600	4.89	52,600	70,200	75	63	80	85,500	15.7	3/4"	1"	ALL
VHP-GYM	DAIKIN	WLVC	2-STAGE	10500	0.60	72.5	19.1	7.5	2	2	1100	30	81	67	480 V	3	62.5 A	80	423,350	70	70	305,600	3.59	219,400	292,150	75	63	85	404,300	8.89	1 1/4"	1 1/2"	ALL

REMARKS:
1. ACCEPTABLE MANUFACTURERS INCLUDE: DAIKIN, FLORIDA HEAT PUMP, TRANE, WATERFURNACE.
2. PERFORMANCE IS BASED ON 100% WATER AT AHRI CONDITIONS.
3. ELECTRICAL CONTRACTOR TO PROVIDE UNIT DISCONNECT.
4. PROVIDE UNIT WITH EITHER ELASTOMERIC VIBRATION HANGERS OR VIBRATION PADS DEPENDING UPON INSTALLATION.

COOLING TOWER SCHEDULE

MARK	MANUFACTURER	SERIES	DIMENSIONS (FT) LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	NO. OF FANS	FLOW RATE (GPM)	MAX. P.D. (FT)	EWT (°F)	LWT (°F)	AMBIENT WB TEMP (F)	ELECTRICAL DATA FAN HP	FAN VOLTAGE	FAN PHASE	VFD	DISCONNECT SWITCH	ELECTRICAL DATA HEATER KW	FAN TYPE	SOUND POWER PER OCTAVE BAND 1	2	3	4	5	6	7	8	REMARKS
CT-1	BAC	3000	8' - 6"	18' - 0"	11' - 2"	16050	1	960	10	95	85	78	20	480 V	3	Yes	YES	0 W	LOW SOUND	99	98	98	93	88	82	77	74	1

REMARKS:
1. SINGLE POINT POWER CONNECT AT UNIT CONTROL PANEL. CONTRACTOR PROVIDE ALL WIRING NECESSARY FROM CONTROL PANEL TO INDIVIDUAL COMPONENTS.
2. NO BASIN HEATER.
3. ACCEPTABLE MANUFACTURERS INCLUDE: BALTIMORE AIR COIL, EVAPCO.

GAS FIRED MAKEUP AIR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN) LENGTH	WIDTH	HEIGHT	WEIGHT (LBS.)	CFM	E.S.P. (IN-WG)	MAXIMUM SONES	DIRECT FIRED GAS HEATING INPUT (MBH)	OUTPUT (MBH)	TEMPERATURE RISE	VFD	ELECTRICAL DATA FLA	VOLTAGE	PHASE	REMARKS
MAU-1	CAPTIVEAIRE	A2-D.500.20D	136	38	53	840	5182	0.5	21	326.4	300.3	56	Yes	6.8 A	480 V	3	ALL

REMARKS:
1. PROVIDE SINGLE POINT POWER CONNECTION AND DISCONNECT.
2. PROVIDE 18" HIGH CURB FOR INSTALLATION ON SLOPED METAL ROOF.
3. CONNECT UNIT TO KITCHEN HOOD CONTROL PANEL INSIDE KITCHEN.

ENERGY RECOVERY VENTILATOR SCHEDULE

MARK	MANUFACTURER	MODEL #	UNIT LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	OUTSIDE AIRFLOW (CFM)	EXHAUST AIRFLOW (CFM)	EXHAUST AIR CONDITION EXHAUST DB (°F)	EXHAUST WB (°F)	OUTSIDE AIR CONDITION SUMMER DB (°F)	SUMMER WB (°F)	WINTER DB (°F)	ENERGY RECOVERY COOLING (MBH)	HEATING (MBH)	FAN STATIC OA FAN E.S.P.	EA FAN E.S.P	ELECTRICAL DATA OA FAN HP	EA FAN HP	VOLTAGE	PHASE	UNIT MCA	UNIT MOCP	REMARKS
ERV-1	RENEWAIRE	EV450IN	45"	17"	37"	200	200	180	72	60	95	78	0	6.1	16.6	0.5	0.5	0.5	0.5	120 V	1	10.1 A	15	ALL
ERV-3	RENEWAIRE	HE1XINH	50"	24"	36"	280	600	540	72	60	95	78	0	15.5	42.7	0.5	0.5	0.5	0.5	120 V	1	18.2 A	25	ALL
ERV-4	RENEWAIRE	HE1.5XINH	49"	53"	35"	500	1400	1260	72	60	95	78	0	30.1	86.8	0.75	0.75	1	1	208 V	1	14 A	15	ALL
ERV-5	RENEWAIRE	HE1XINH	50"	24"	36"	280	1100	990	72	60	95	78	0	21.7	64.0	0.75	0.75	0.5	0.5	120 V	1	18.2 A	25	ALL
ERV-6	RENEWAIRE	HE2XINH	65"	43"	36"	620	1900	1710	72	60	95	78	0	40.9	118.0	0.75	0.75	1.5	2	480 V	3	6.6 A	15	ALL
ERV-GYM	RENEWAIRE	HE4XINV	82"	51"	62"	1200	3500	3150	72	60	95	78	0	78.6	224.1	1	1	2	3	480 V	3	9 A	15	ALL

REMARKS:
1. PROVIDE WITH SINGLE POINT POWER CONNECTION AND DISCONNECT.
2. COORDINATE INSTALLATION TO ENSURE ACCESS TO ALL PANEL DOORS.
3. PROVIDE FLEXIBLE DUCT AT ALL DUCT CONNECTIONS.
4. PROVIDE EITHER VIBRATION ISOLATION HANGERS OR VIBRATION PADS DEPENDING UPON INSTALLATION.

PLATE & FRAME HEAT EXCHANGER - WATER TO WATER

MARK	MANUFACTURER	MODEL #	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	OPER. WEIGHT (LBS)	HEAT TRANSFER (MBH)	HPS (HOT SIDE) GPM	EWT (°F)	LWT (°F)	PD (FT)	PIPE CONN (IN)	COOLING TOWER (COLD SIDE) GPM	EWT (°F)	LWT (°F)	PD (FT)	PIPE CONN (IN)	FOULING FACTOR	DESIGN PRESSURE (PSI)	REMARKS
ALPHA LAVAL		AQ8 SERIES	48"	31"	83"	5000	4758.0	960	100	90	11.10	8	960	85	95	11.30	8	0.014	150	ALL

REMARKS:
1. 304 S.S. PLATES

HYDRONIC PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	SERVICE	GPM	PRESSURE (FEET HEAD)	IMPELLER DIAMETER (IN)	VFD	MINIMUM EFFICIENCY (%)	RPM	ELECTRICAL DATA HP	BRAKE HP	VOLTAGE	PHASE	REMARKS
P-1	BELL & GOSSETT	e-1510 3GB	BASE MOUNT	LOOP PUMP	960	100.00	13 1/2"	Yes	72	1800	20	13.2	480 V	3	ALL
P-2	BELL & GOSSETT	e-1510 3GB	BASE MOUNT	LOOP PUMP	960	100.00	13 1/2"	Yes	72	1800	20	13.2	480 V	3	ALL
VP-1A	BELL & GOSSETT	VIT SERIES	VERT. TURBINE	TOWER PUMP	960	37.00		No	80	1775	15	13	480 V	3	ALL
VP-1B	BELL & GOSSETT	VIT SERIES	VERT. TURBINE	TOWER PUMP	960	37.00		No	80	1775	15	13	480 V	3	ALL

REMARKS:
1. PROVIDE WITH SINGLE POINT POWER CONNECTION AND DISCONNECT.
2. PROVIDE SHAFT GROUNDING RINGS.
3. ACCEPTABLE MANUFACTURERS INCLUDE: BELL & GOSSETT, TACO, GRUNDFOS, ARMSTRONG.

BOILER SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	FUEL	EWT (°F)	LWT (°F)	WATER FLOW (GPM)	INPUT (MBH)	GROSS OUTPUT (MBH)	WATER PRESSURE DROP (FT HD)	VOLTAGE	PHASE	FLA	REMARKS
B-1	FULTON	EDR-1500	CONDENSING	NG	120	140	140	1500	1402.5	1.85	120 V	1	20 A	ALL
B-2	FULTON	EDR-1500	CONDENSING	NG	120	140	140	1500	1402.5	1.85	120 V	1	20 A	ALL

REMARKS:
1. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.
2. PROVIDE WITH DUCTED COMBUSTION AIR AND FLUE PER MANUFACTURERS RECOMMENDATIONS.
3. PROVIDE BOILER WITH STEP-DOWN GAS PRESSURE REGULATOR AS REQUIRED.
4. CONNECT BOILERS TO EXISTING EMERGENCY KILL SWITCHES.
5. ACCEPTABLE MANUFACTURERS INCLUDE: FULTON, LOCHINVAR.

GRAVITY HOOD SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	MAXIMUM CFM	THROAT LENGTH (IN)	THROAT WIDTH (IN)	THROAT VELOCITY (FPM)	PRESSURE DROP (IN WC)	WEIGHT (LBS.)	REMARKS
GE-1	GREENHECK	FGR	EXHAUST	3500	24	24	875	0.13	65	ALL
GE-2	GREENHECK	FGR	EXHAUST	1000	14	14	735	0.09	45	ALL
GE-3	GREENHECK	FGR	EXHAUST	500	10	10	720	0.09	35	ALL
GE-4	GREENHECK	FGR	EXHAUST	200	8	8	450	0.04	35	ALL
GE-5	GREENHECK	FGR	EXHAUST	1710	18	18	760	0.10	55	ALL
GE-6	GREENHECK	FGR	EXHAUST	1710	18	18	760	0.10	55	ALL
GI-1	GREENHECK	FGI	INTAKE	3500	24	24	875	0.13	75	ALL
GI-2	GREENHECK	FGI	INTAKE	1900	18	18	844	0.12	55	ALL
GI-3	GREENHECK	FGI	INTAKE	1900	18	18	844	0.12	55	ALL

REMARKS:
1. COLOR AND FINISH TO BE SELECTED FROM STANDARD FINISHES AND COLORS. MATERIAL TO BE ALUMINUM.
2. PROVIDE BIRD SCREEN ON INSIDE FACE OF LOUVER.
3. PROVIDE EITHER CURB ADAPTOR FOR MOUNTING ON EXISTING CURB OR 18" HIGH CURB WHEN IT'S A NEW PENETRATION.
4. ACCEPTABLE MANUFACTURERS INCLUDE: GREENHECK, ACME, CARNES, RUSKIN.

SPLIT SYSTEM INDOOR UNIT SCHEDULE

MARK	MODEL #	MANUF.	DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	AIRFLOW (CFM)	ELECTRICAL VOLTAGE	PHASE	REMARKS
AC-1	FTXS18LVJU	DAIKIN	42	10	14	31	625	208 V	1	ALL

REMARKS:
1. PROVIDE WITH INTEGRAL DISCONNECT PER NEC WITH SINGLE POINT POWER CONNECTION.
2. POWER FED THROUGH ASSOCIATED OUTDOOR UNIT.
3. REFER TO SPLIT SYSTEM OUTDOOR UNIT SCHEDULE FOR HEATING/COOLING PERFORMANCE.
4. ACCEPTABLE MANUFACTURERS INCLUDE: LG, MITSUBISHI, DAIKIN.

SPLIT SYSTEM OUTDOOR UNIT SCHEDULE

MARK	MANUF.	MODEL #	DIMENSIONS (IN.) LENGTH	WIDTH	HEIGHT	WEIGHT (LBS)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	HEATING CAPACITY (MBH)	MINIMUM SEER	ELECTRICAL MCA	MOCP	VOLTAGE	PHASE	REMARKS
CU-1	DAIKIN	RXS18LVJU	33	12	29	105	18.0	14.8	21.6	20.3	13.8 A	20	208 V	1	ALL

REMARKS:
1. PROVIDE WITH INTEGRAL DISCONNECT PER NEC WITH SINGLE POINT POWER CONNECTION.
2. FEED POWER THROUGH UNIT TO ASSOCIATED INDOOR UNIT.
3. PAIR OUTDOOR UNIT WITH ASSOCIATED INDOOR UNIT.
4. ACCEPTABLE MANUFACTURERS INCLUDE: LG, MITSUBISHI, DAIKIN.
5. MOUNT UNIT ON NEW CONCRETE PAD.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	TYPE	AIRFLOW (CFM)	E.S.P.	DRIVE	RPM	FAN HP	WEIGHT (LBS)	ELECTRICAL DATA VOLTAGE	PHASE	SONES	REMARKS
EF-1	CAPTIVEAIRE	DU240HFA	KITCHEN HOODS	UPBLAST	5775	1.50	DIRECT	528	7.5	315	480 V	3	15.4	1, 3, 4, 5
EF-1	CAPTIVEAIRE	DU240HFA		UPBLAST	5775	1.50	DIRECT			315	480 V	3		1, 3, 4, 5
EF-2	GREENHECK	CUE-095-G	DISH MACHINE	UPBLAST	600	0.25	DIRECT	1266	0.083	40	120 V	1	6.1	1, 2, 4, 5
EF-3	GREENHECK	G-070-D	RESTROOM	DOWNBLAST	200	0.25	DIRECT	1380	0.033	20	120 V	1	3.2	1, 2, 4, 5
EF-4	GREENHECK	G-090-D	KILN	DOWNBLAST	500	0.25	DIRECT	1344	0.067	30	120 V	1	5.8	1, 2, 4, 5

REMARKS:
1. PROVIDE WITH INTEGRAL DISCONNECT PER NEC WITH SINGLE POINT POWER CONNECTION.
2. PROVIDE WITH UNIT MOUNTED SPEED CONTROL.
3. PROVIDE WITH VFD CONNECTED TO KITCHEN HOOD CONTROL PANEL.
4. PROVIDE WITH CURB ADAPTOR TO MOUNT ON EXISTING CURB.
5. ACCEPTABLE MANUFACTURERS INCLUDE: GREENHECK, CARNES, CAPTIVEAIRE AND LOREN-COOK.

REGISTERS, GRILLES, AND DIFFUSERS

MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE	PANEL SIZE	DUCT INLET SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	NOISE CRITERIA	THROW PATTERN	REMARKS
E-1	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	6"Ø	6"Ø	100	0.05	25	-	1, 2, 6
E-1A	TITUS	50F	ALUMINUM 1/2" EGG CRATE	12"X12"	12"X12"	6"Ø	6"Ø	100	0.05	25	-	1, 2, 6
E-2	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	8"Ø	8"Ø	225	0.05	25	-	1, 2, 6
E-3	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	10"Ø	10"Ø	400	0.05	25	-	1, 2, 6
E-4	TITUS	63FL	ALUMINUM HEAVY DUTY GRILLE	48"X24"	48"X24"	48"X24"	48"X24"	2800	0.05	21	-	1, 2
E-5	TITUS	350FL	ALUMINUM SIDEWALL GRILLE	8"X6"	8"X6"	8"X6"	8"X6"	125	0.05	10	-	1, 2
R-1	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	6"Ø	6"Ø	100	0.05	25	-	1, 2, 5, 6
R-2	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	8"Ø	8"Ø	225	0.05	25	-	1, 2, 5, 6
R-3	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	10"Ø	10"Ø	400	0.05	25	-	1, 2, 5, 6
R-4	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	12"Ø	12"Ø	600	0.05	25	-	1, 2, 5, 6
R-5	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	14"Ø	14"Ø	900	0.05	25	-	1, 2, 5, 6
R-6	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	16"Ø	16"Ø	1200	0.05	25	-	1, 2, 5, 6
R-7	TITUS	63FS	ALUMINUM HEAVY DUTY GRILLE	36"X48"	36"X48"	36"X48"	36"X48"	5250	0.05	30	-	1, 2, 6
S-1	TITUS	TDCA-AA	ALUMINUM ADJUSTABLE SQUARE DIFFUSER	24"X24"	6"X6"	6"Ø	6"Ø	100	0.05	25	4-WAY	1, 2, 3, 6
S-2	TITUS	TDCA-AA	ALUMINUM ADJUSTABLE SQUARE DIFFUSER	24"X24"	9"X9"	8"Ø	8"Ø	225	0.05	25	4-WAY	1, 2, 3, 6
S-3	TITUS	TDCA-AA	ALUMINUM ADJUSTABLE SQUARE DIFFUSER	24"X24"	12"X12"	10"Ø	10"Ø	400	0.05	25	4-WAY	1, 2, 3, 6
S-4	TITUS	TDCA-AA	ALUMINUM ADJUSTABLE SQUARE DIFFUSER	24"X24"	12"X12"	12"Ø	12"Ø	600	0.05	25	4-WAY	1, 2, 3, 6
S-5	TITUS	DL	DRUM LOUVER	20"X10"	20"X10"	20"X10"	20"X10"	585	0.05	13	-	1, 2, 4, 6
S-6	TITUS	1700L	ALUMINUM NARROW BLADE	24"X18"	24"X18"	24"X18"	24"X18"	1750	0.07	28	-	1, 2
T-1	TITUS	50F	ALUMINUM 1/2" EGG CRATE	24"X24"	24"X24"	-	-	900	0.05	25	-	1, 2, 6
T-2	TITUS	350FL	ALUMINUM SIDEWALL GRILLE	8"X6"	8"X6"	8"X6"	8"X6"	125	0.05	10	-	1, 2, 6

REMARKS:
1. ACCEPTABLE MANUFACTURERS INCLUDE: TITUS, KRUEGER, METALAIRE, CARNES, PRICE.
2. COLOR AND FINISH TO BE SELECTED FROM STANDARD COLORS.
3. PROVIDE WITH AIR PATTERN DIFFLECTORS.
4. PROVIDE WITH INTEGRAL BALANCE DAMPERS.
5. PROVIDE WITH INTEGRAL 1" FILTER RACK.
6. COORDINATE FRAME WITH EITHER LAY-IN OR HARD CEILINGS DEPENDING UPON INSTALLATION LOCATION.

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Project Status

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HARRODSBURG, KENTUCKY

MECHANICAL SCHEDULES

PROJECT #:	XMKM18
DATE:	SEPT. 21, 2018
DRAWN:	JEA
CHECKED:	ADS

REVISIONS

M7.0